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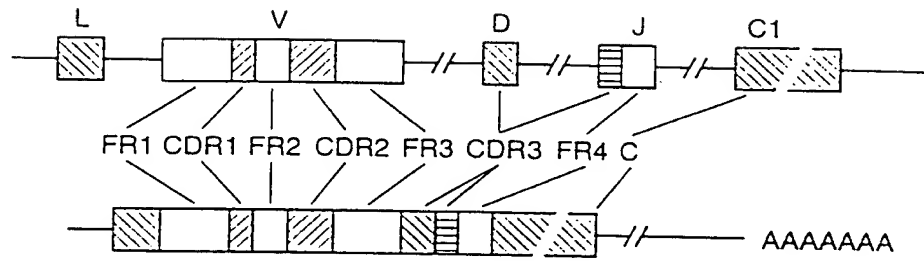


FIG. 1

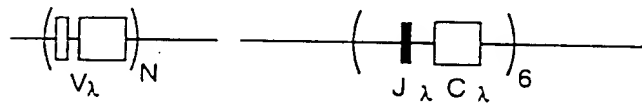


FIG. 2

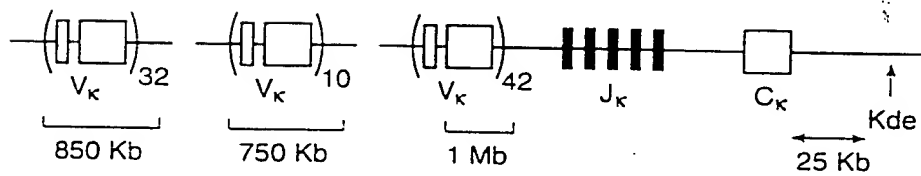


FIG. 3

008277" 59642260

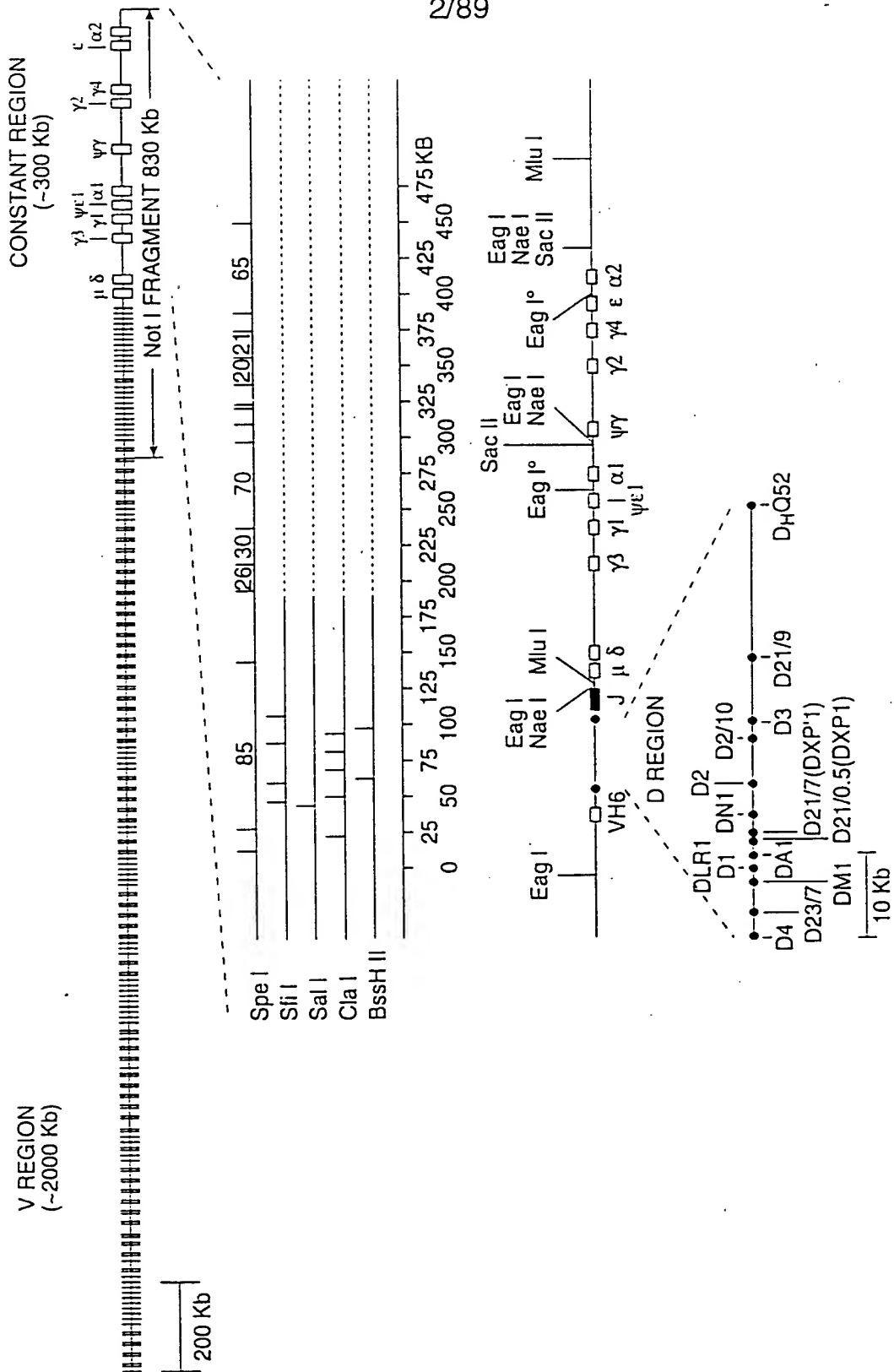


FIG. 4

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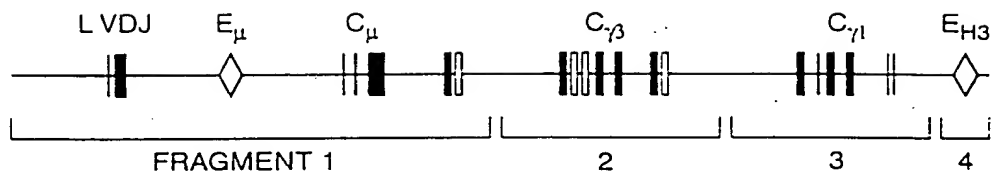


FIG. 5

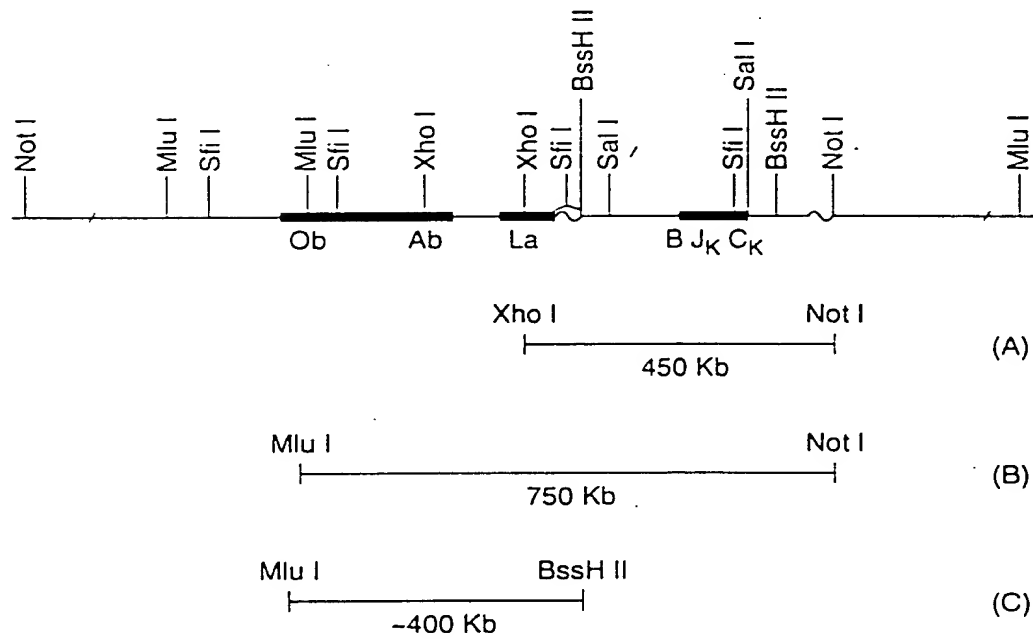


FIG. 6

008211 5954260

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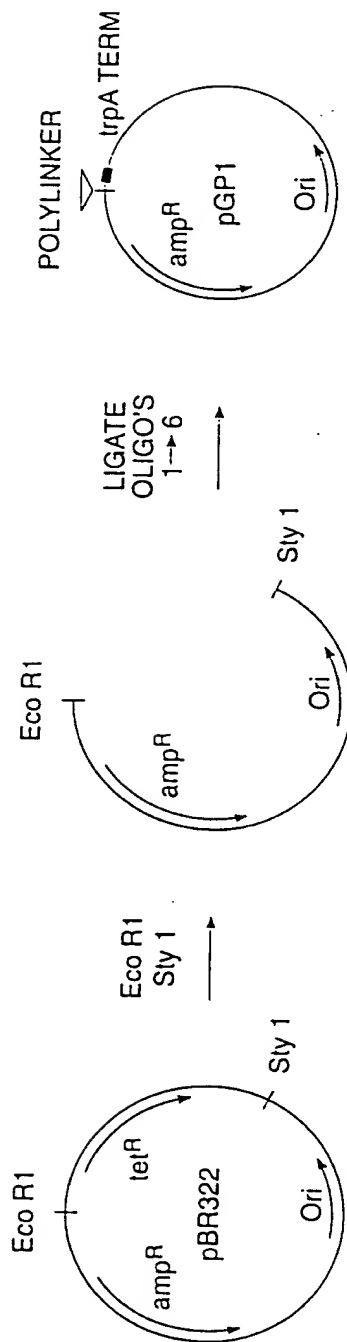


FIG. 7

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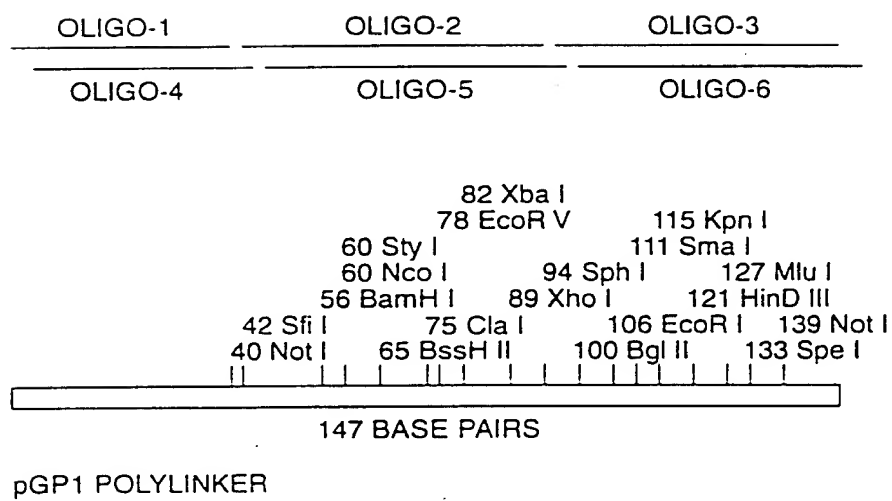


FIG. 8

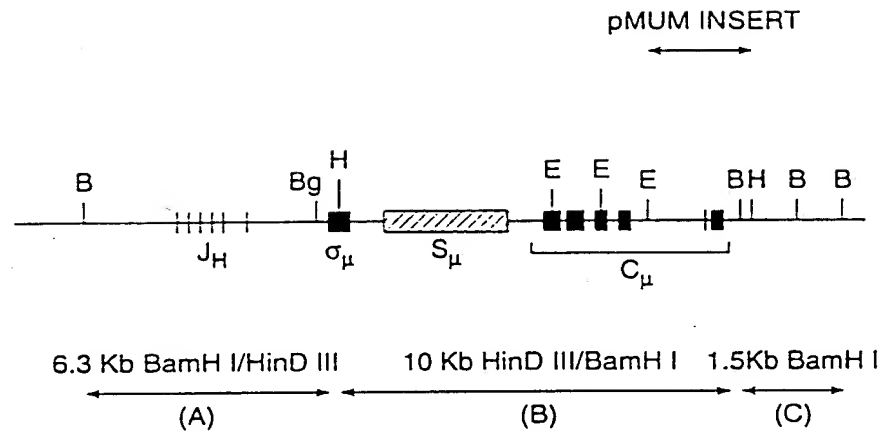
HUMAN μ LOCUS

FIG. 9

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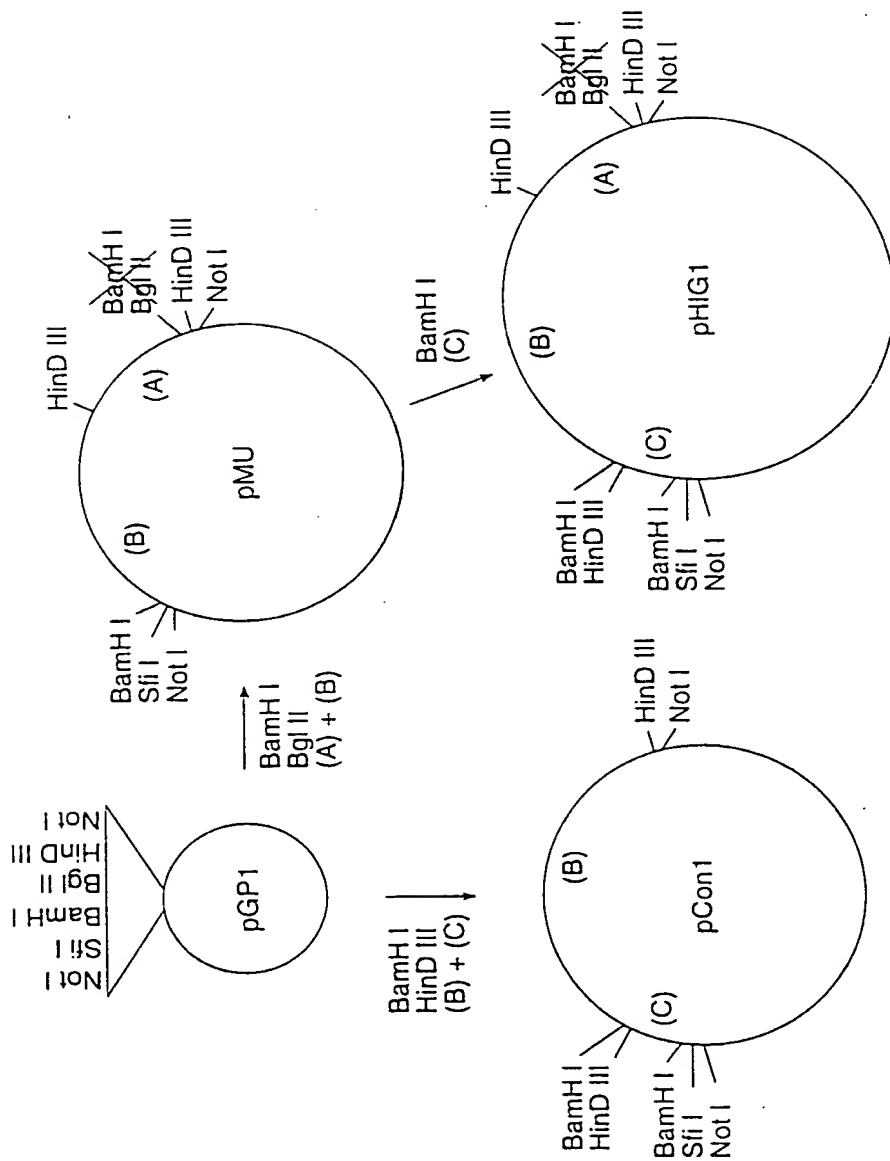


FIG. 10

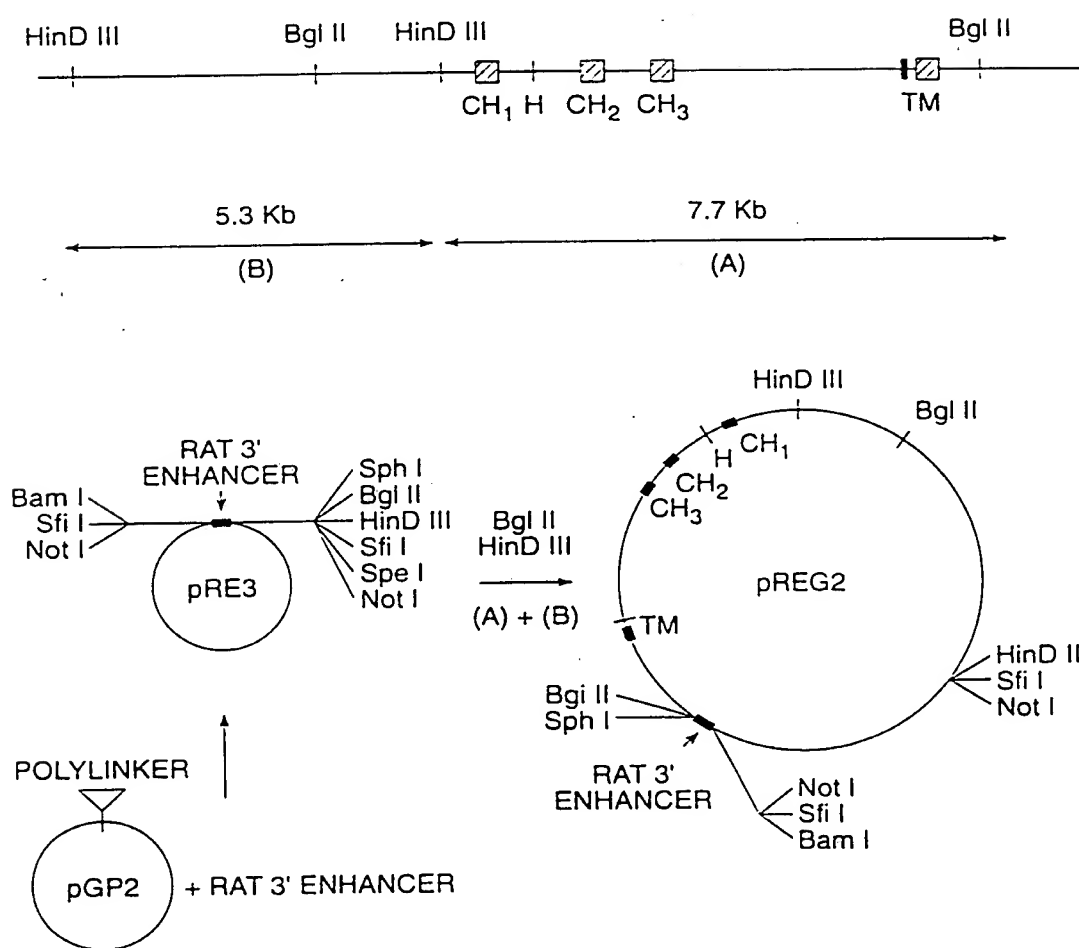
HUMAN C_{γ1} GENE

FIG. 11

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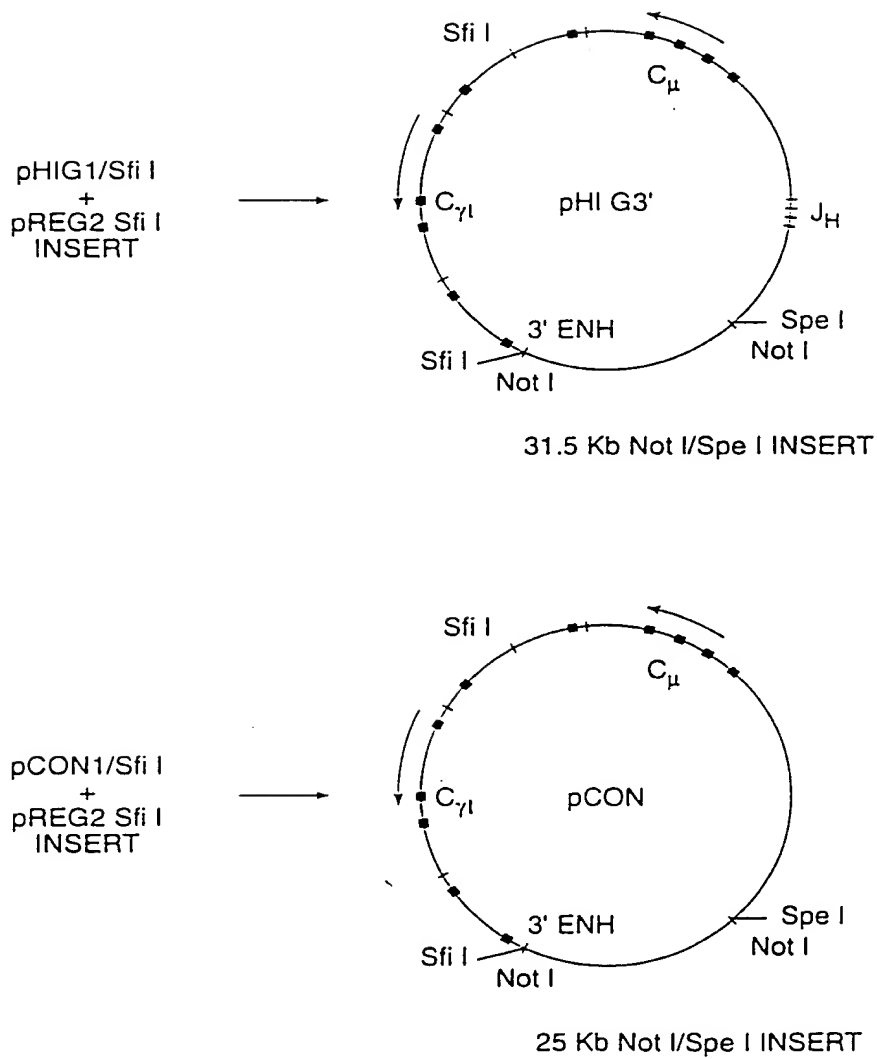


FIG. 12

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HUMAN D REGION

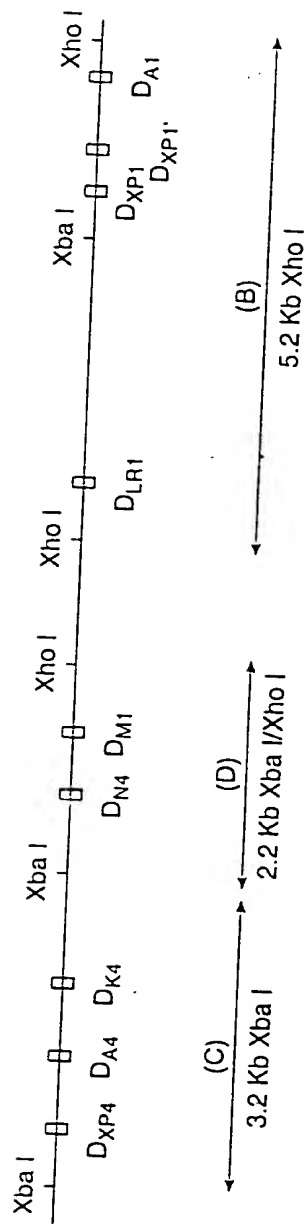


FIG. 13

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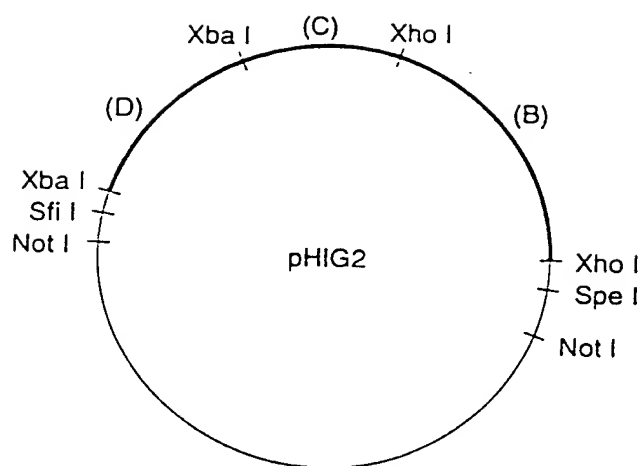


FIG. 14

008277 5964260

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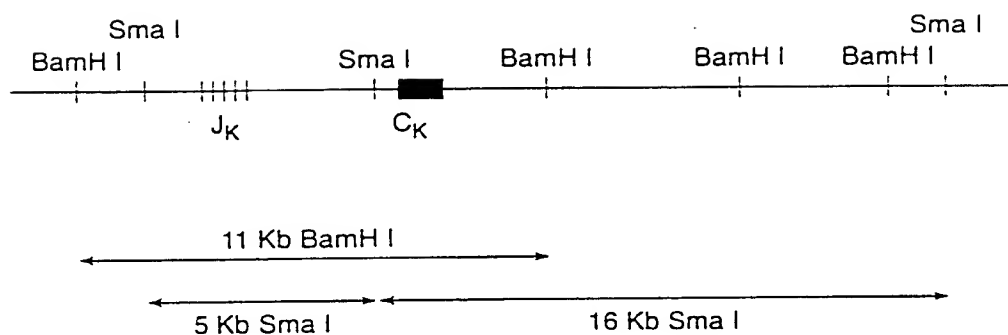


FIG. 15

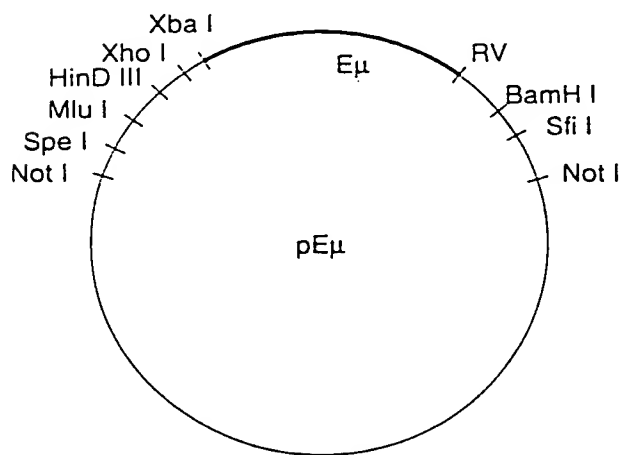


FIG. 16

09724965-112800

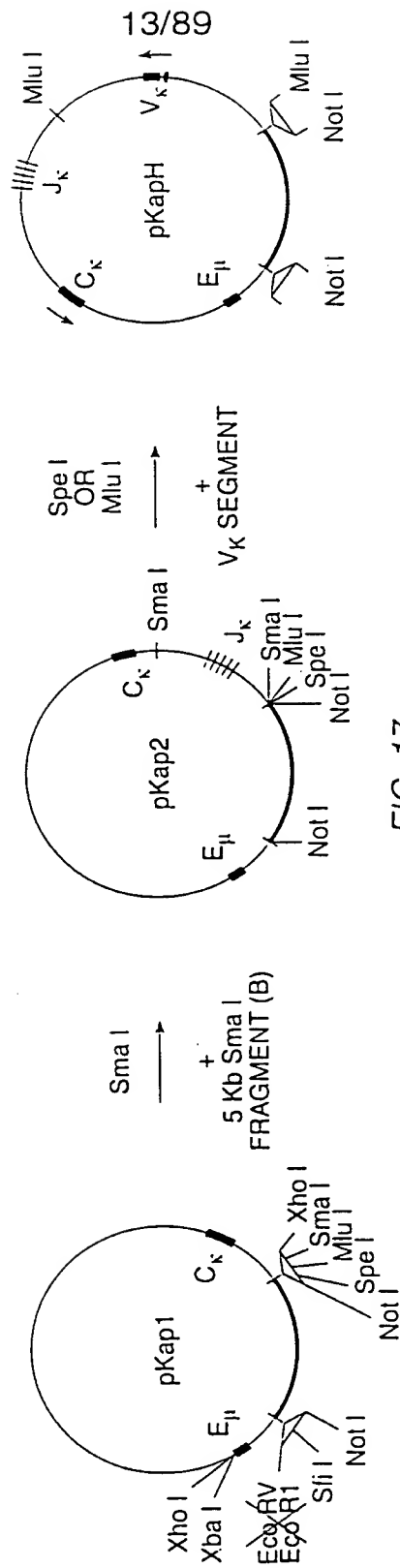


FIG. 17

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MOUSE HEAVY CHAIN LOCUS

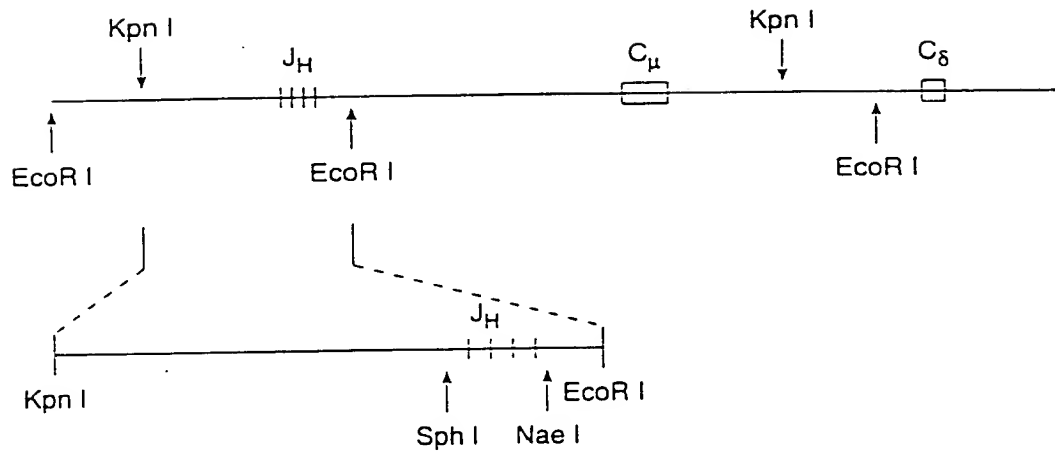


FIG. 18A

008277-59642/60

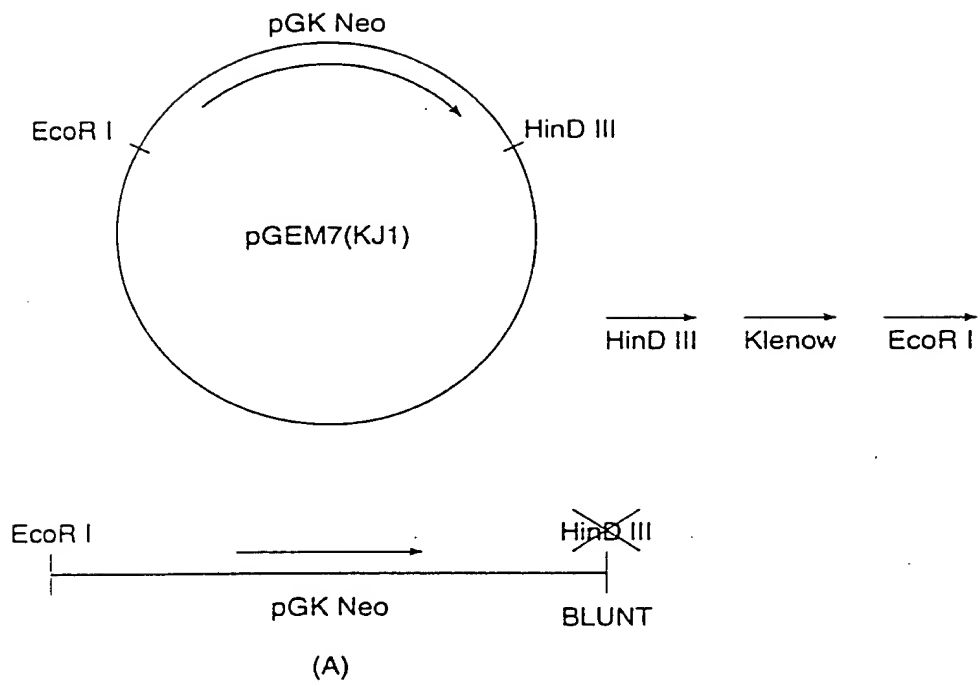


FIG. 18B

000211 59642260

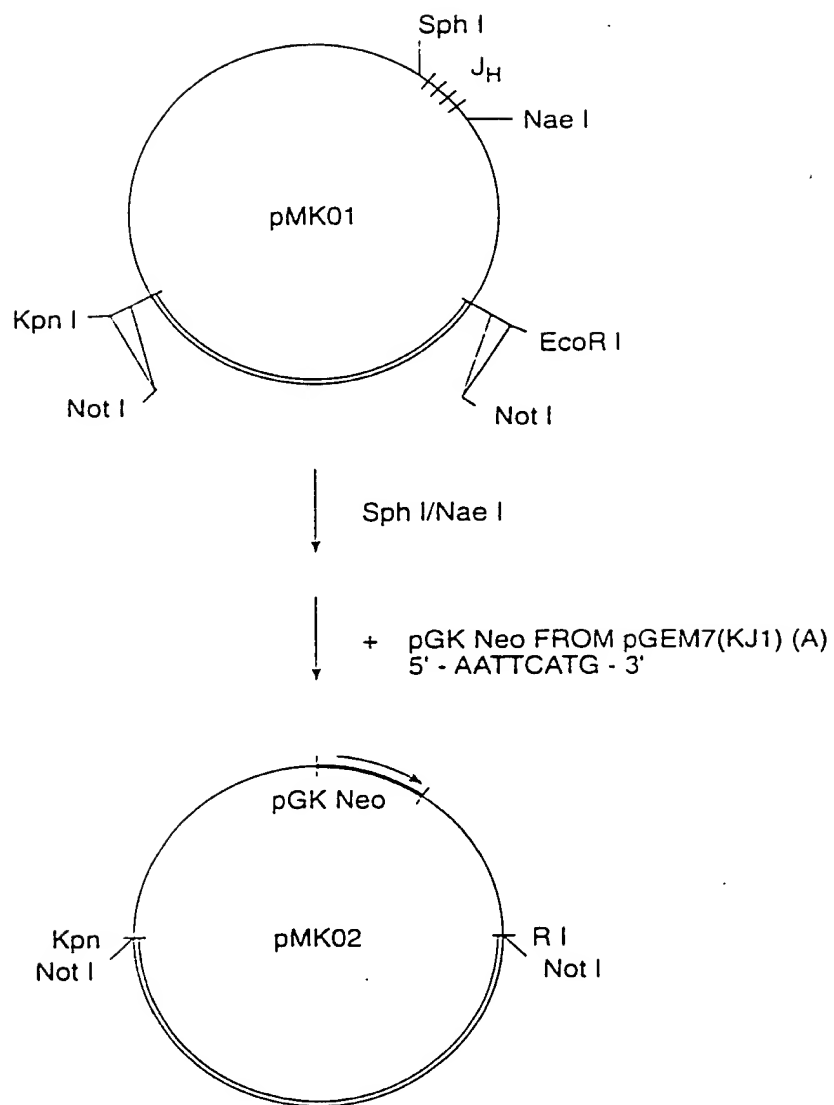


FIG. 18C

00821T" 59642260

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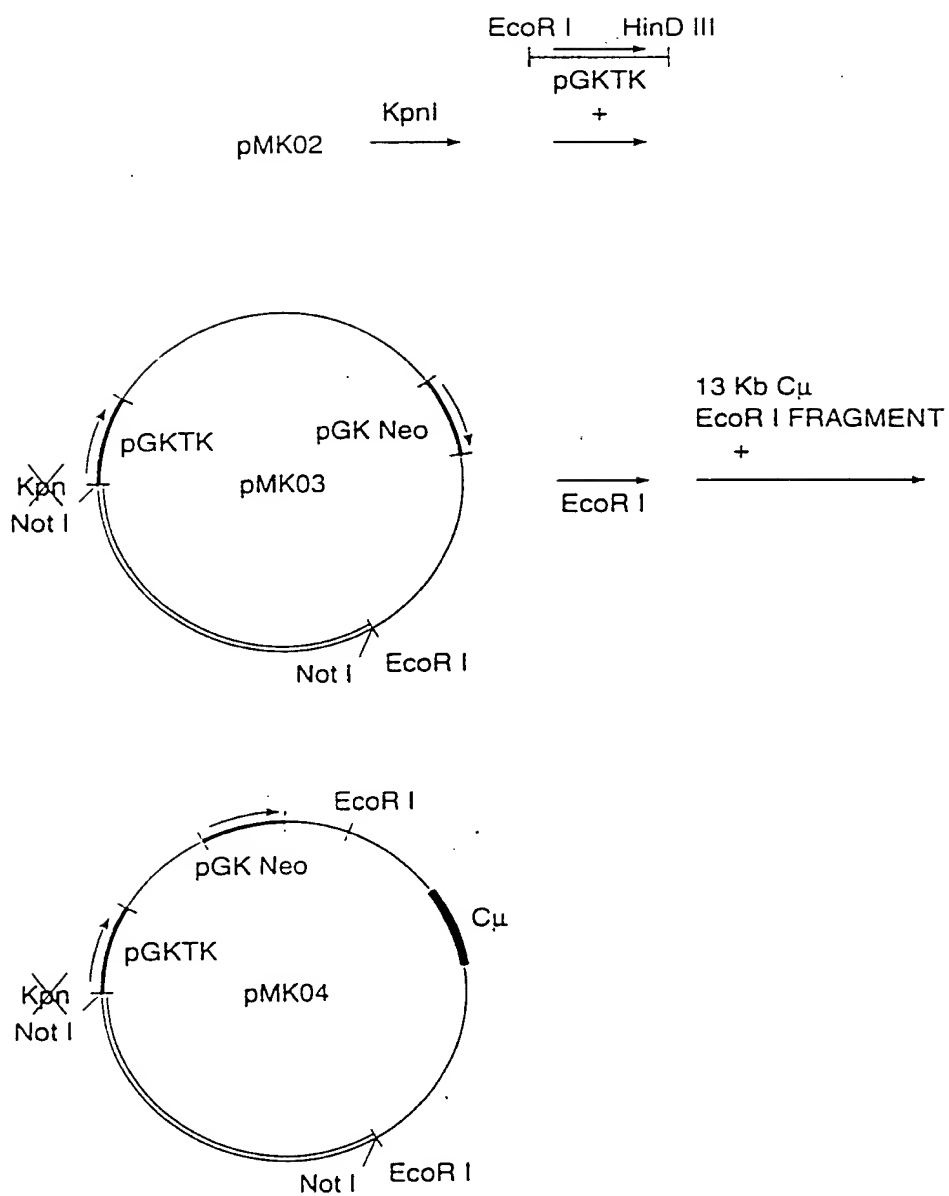


FIG. 18D

09724965-112800

MOUSE KAPPA GENE

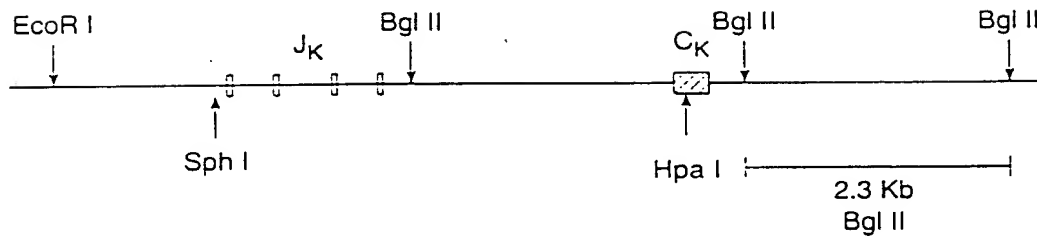


FIG. 19A

008211" 596h2260

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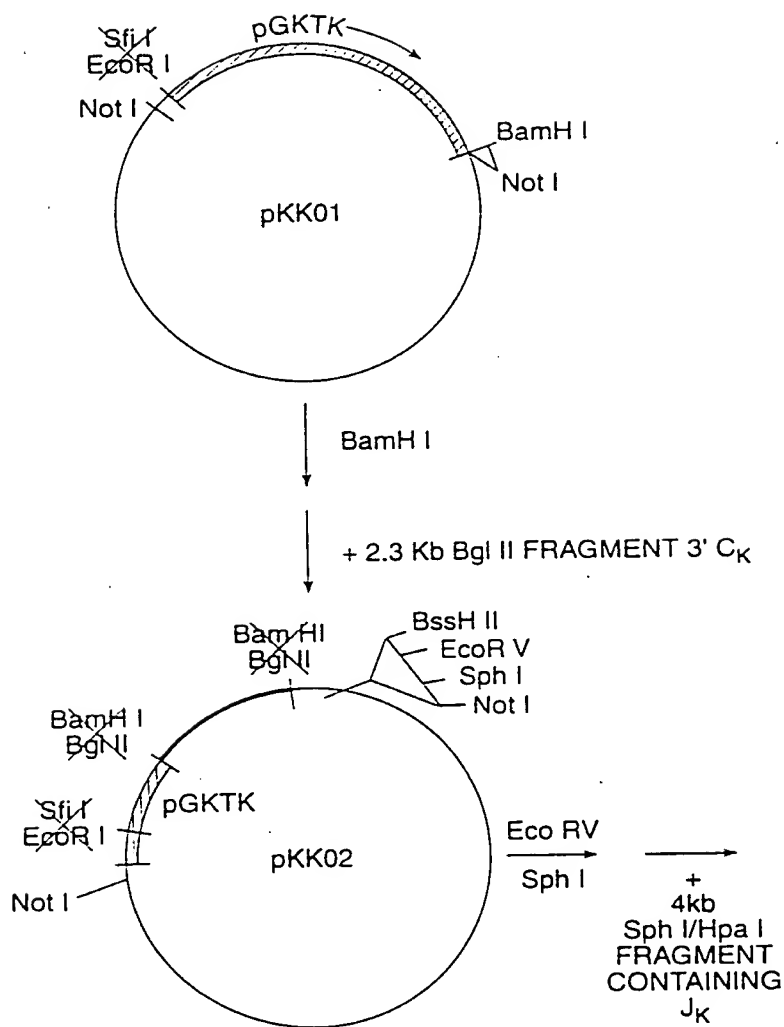


FIG. 19B

09724965, 112800

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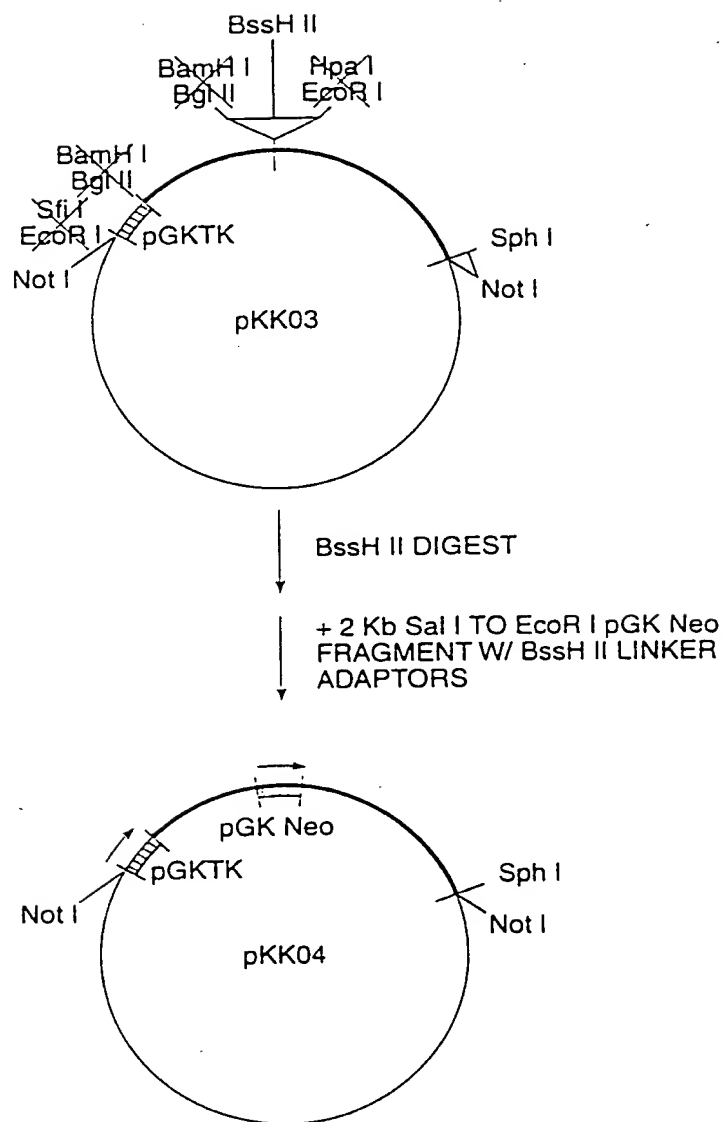


FIG. 19C

008277 5964260

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KAPPA LIGHT CHAIN TARGETING VECTOR

A) GENOMIC KAPPA LOCUS

B) pNEO-K3'

C) pNEO-K3'5'

D) J/C K1

E) TARGETED KAPPA LOCUS

Restriction enzymes: Sac I, Xho I, Xba I, Bgl II, Pst I, Sph I, EcoR I, Not I, BamH I, Cla I, Hind III, TK, NEO, JK, Ck, DIAGNOSTIC PROBE.

FIG. 20

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008277" 59642260

MOUSE HEAVY CHAIN TARGETING VECTOR

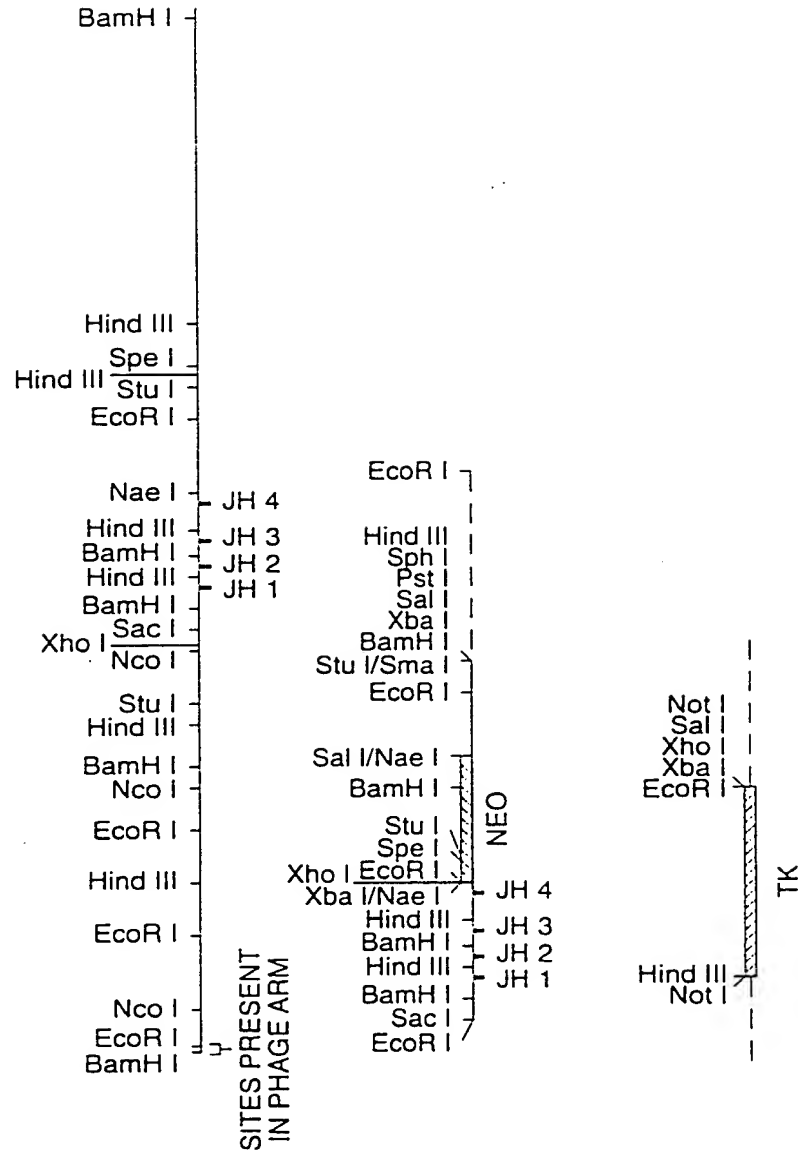
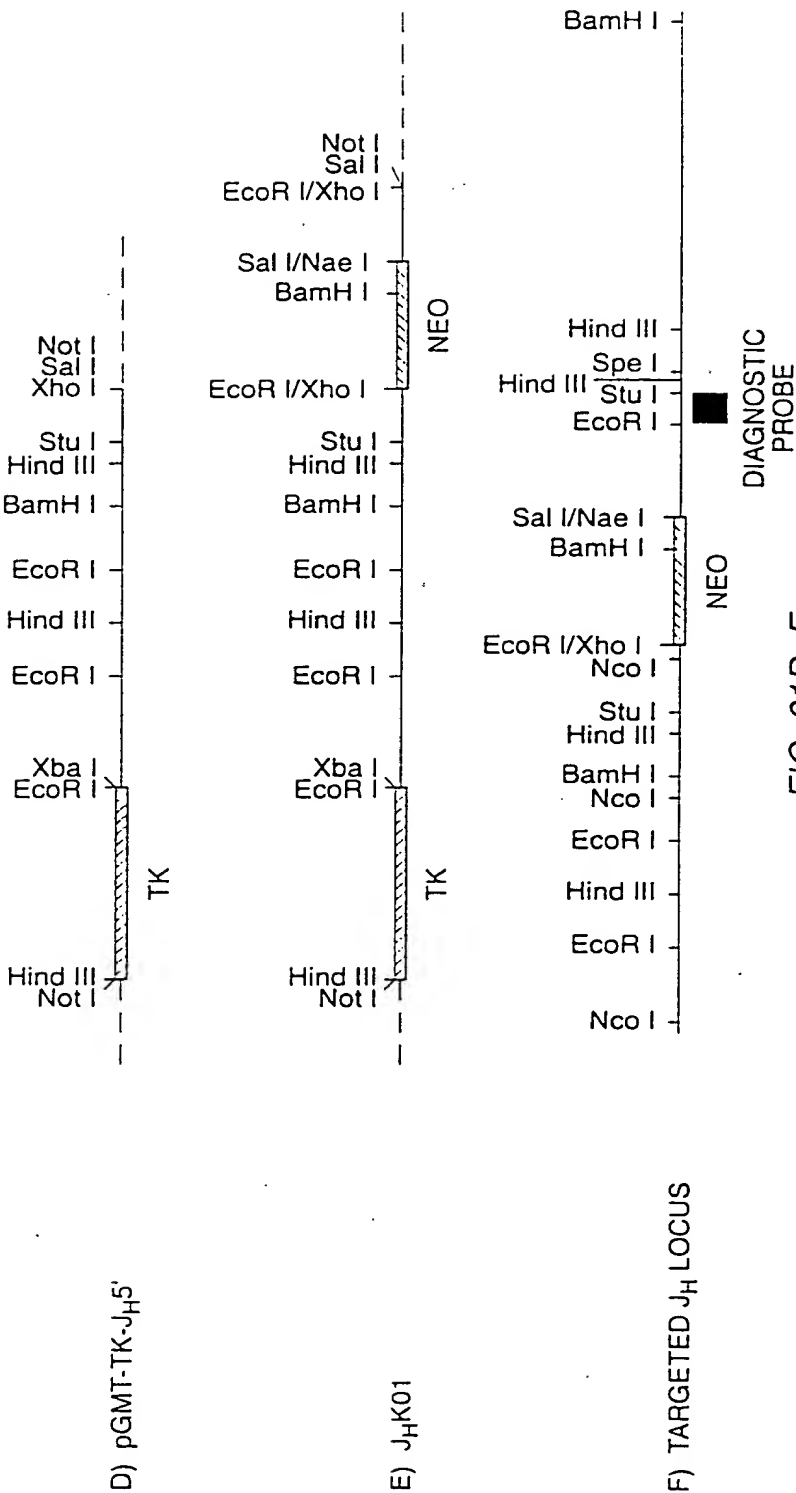


FIG. 21A-C

MOUSE HEAVY CHAIN TARGETING VECTOR



F) TARGETED J_H LOCUS

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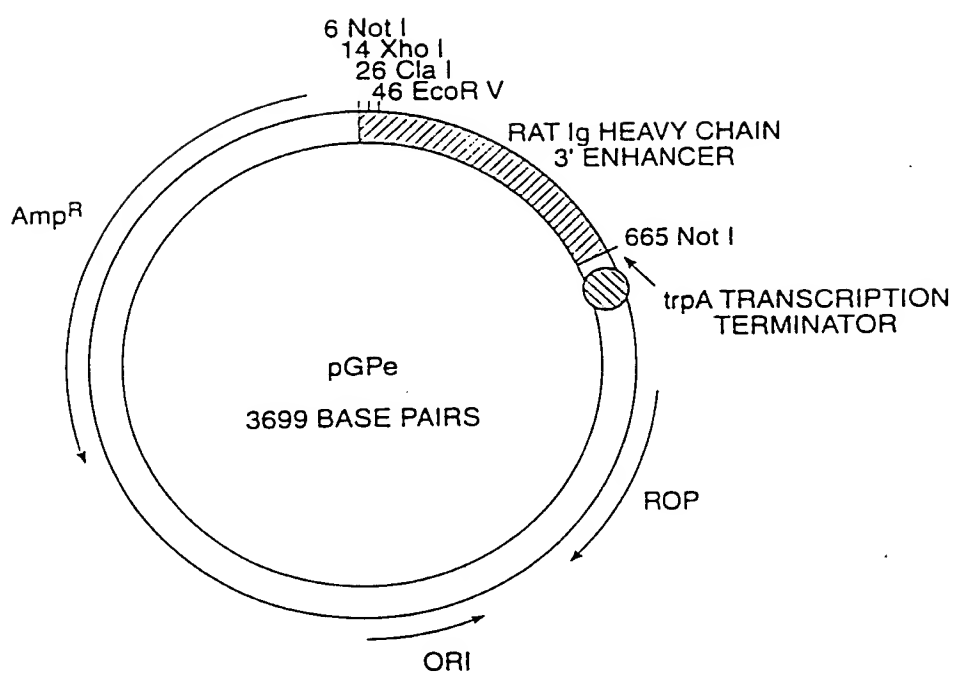


FIG. 22

008271" 5964260

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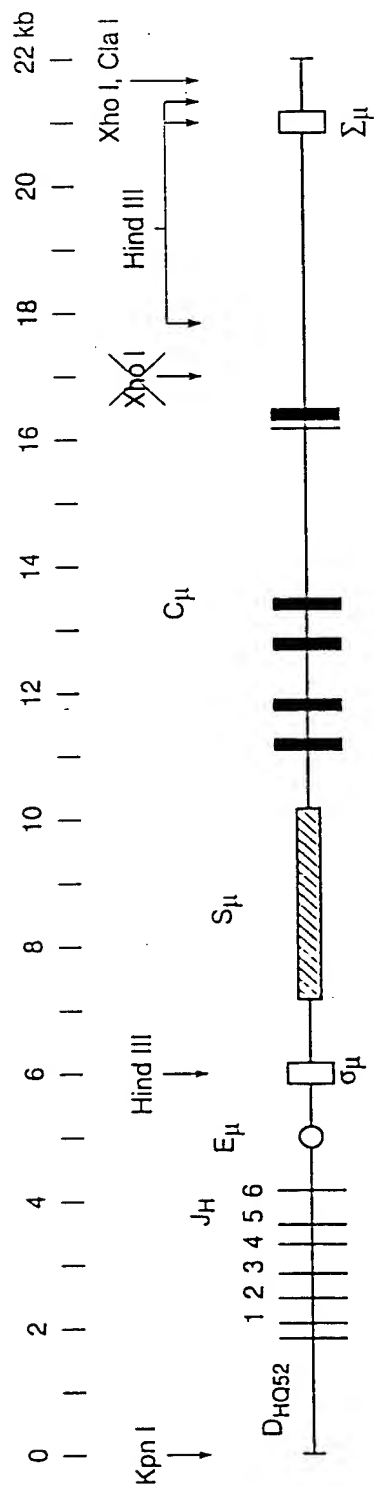


FIG. 23

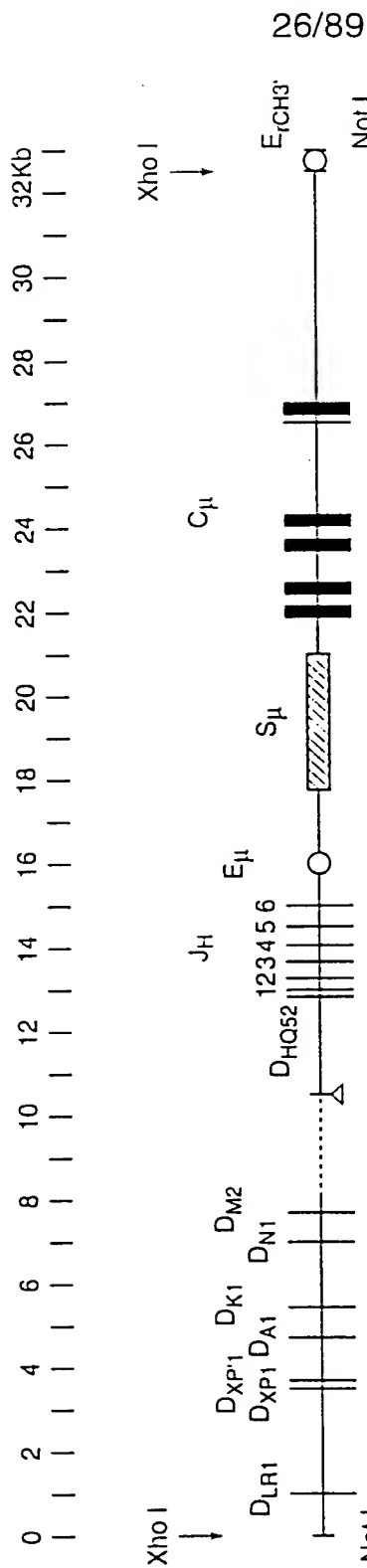


FIG. 24

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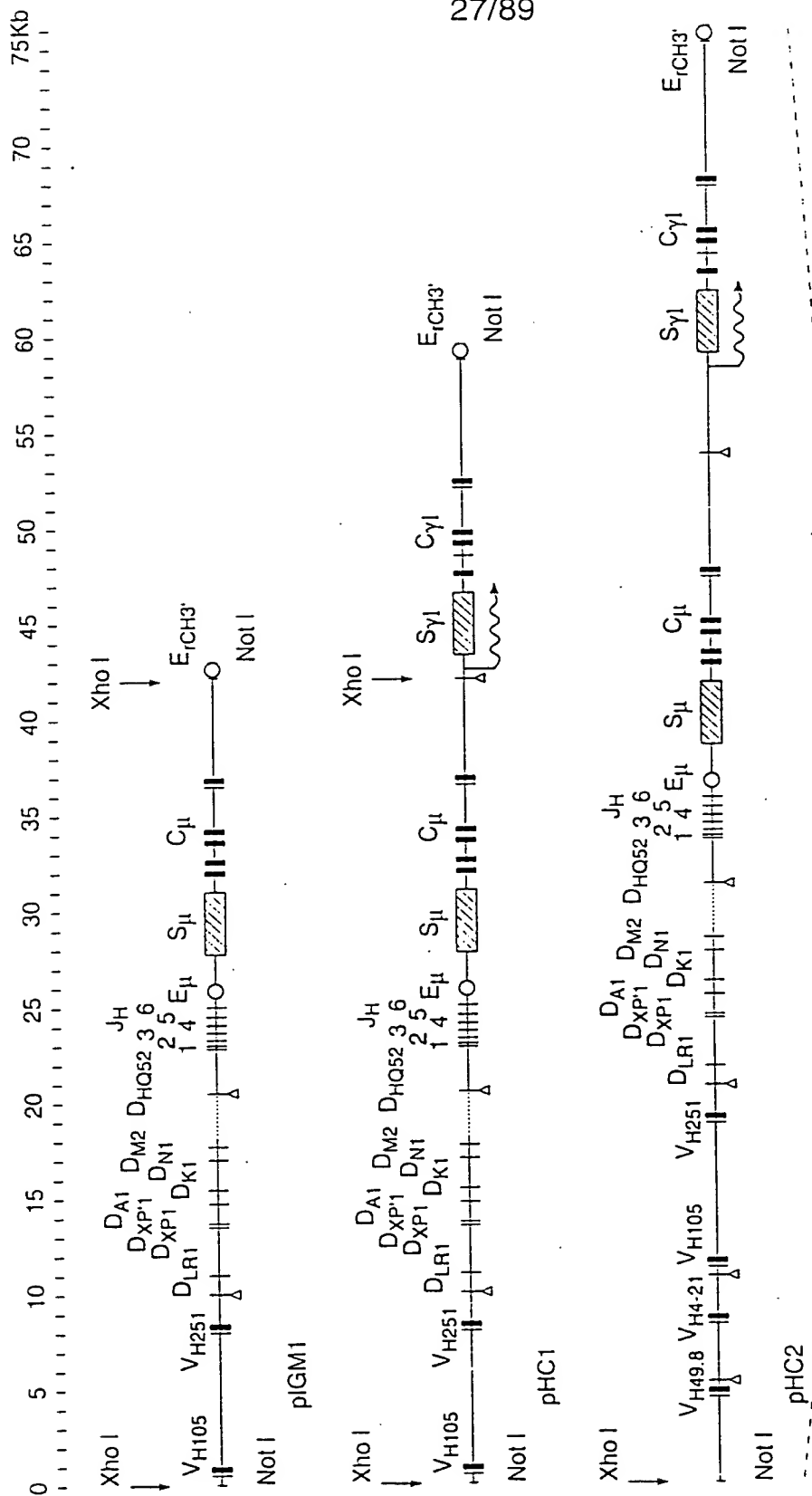


FIG. 25

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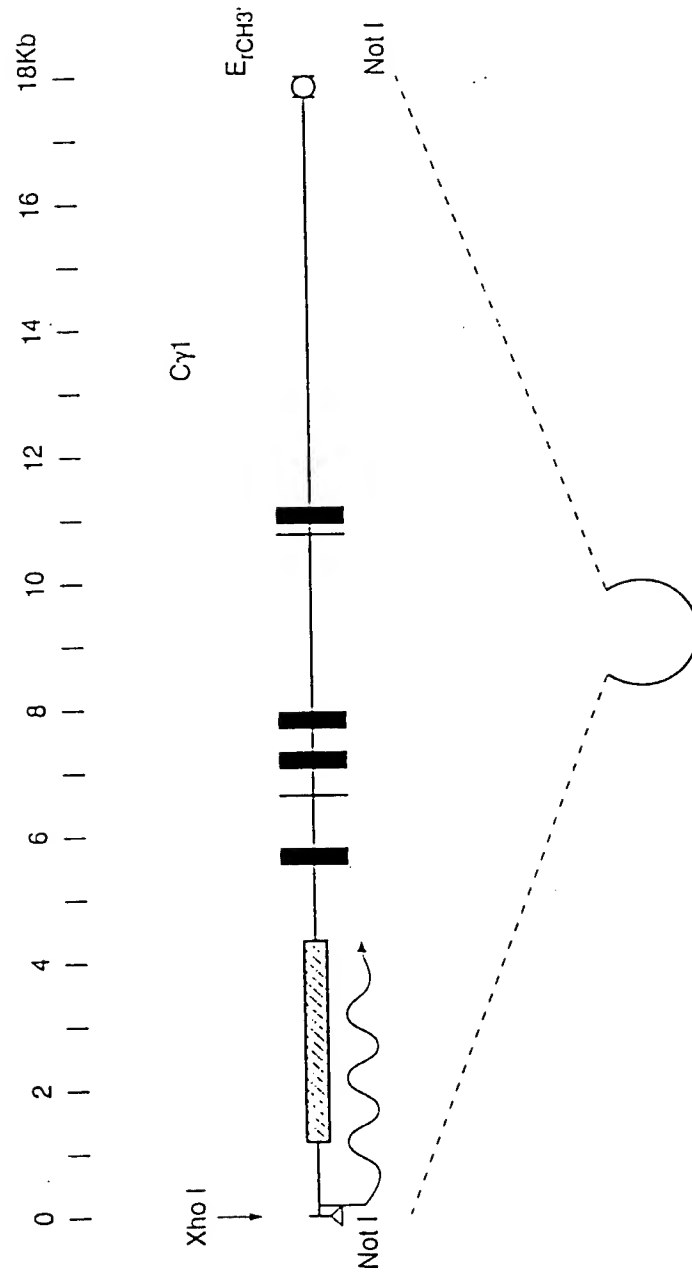
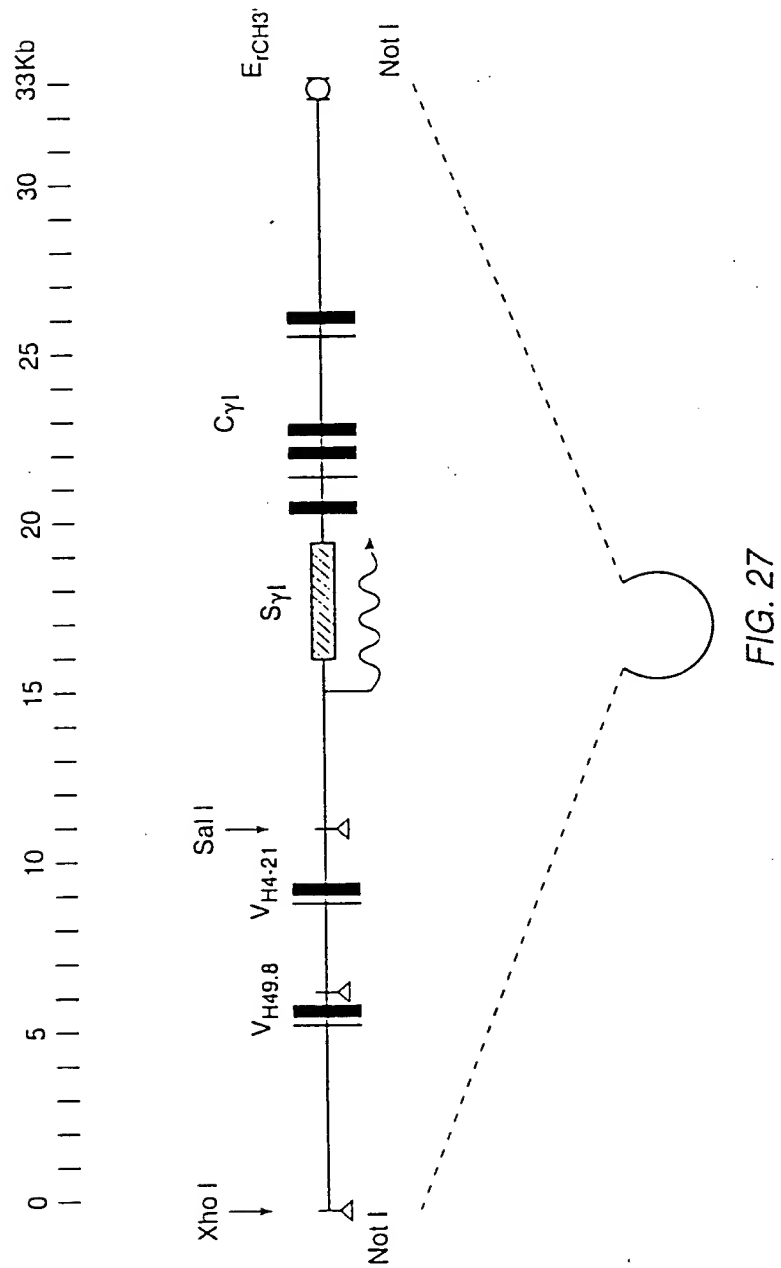
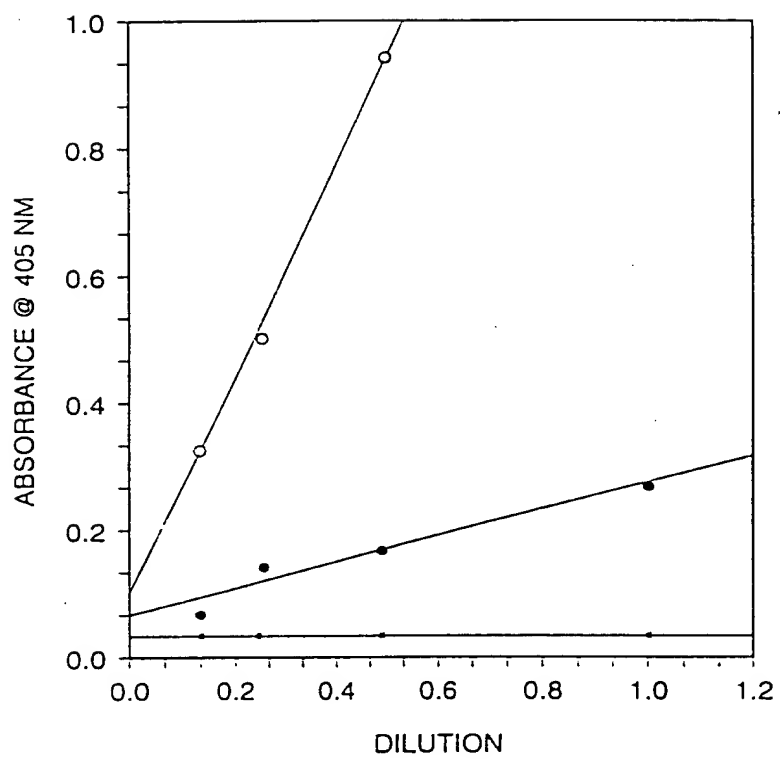


FIG. 26



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○ IgM } pHCl TRANSGENIC
● IgG1 }
× IgM } NON-TRANSGENIC CONTROL
+ IgG1 }

FIG. 28

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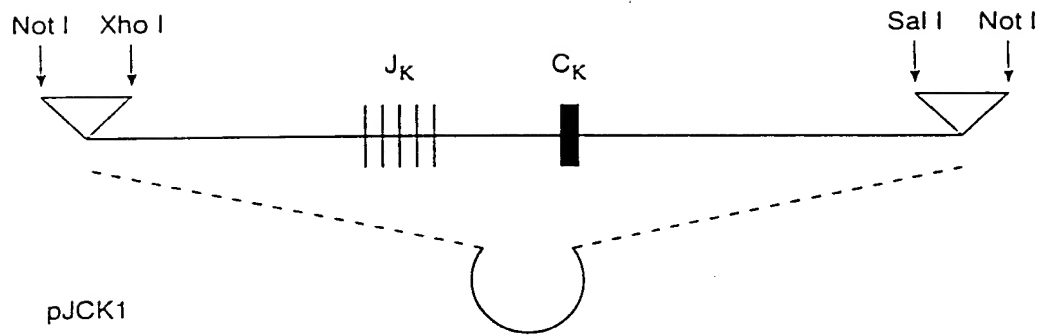
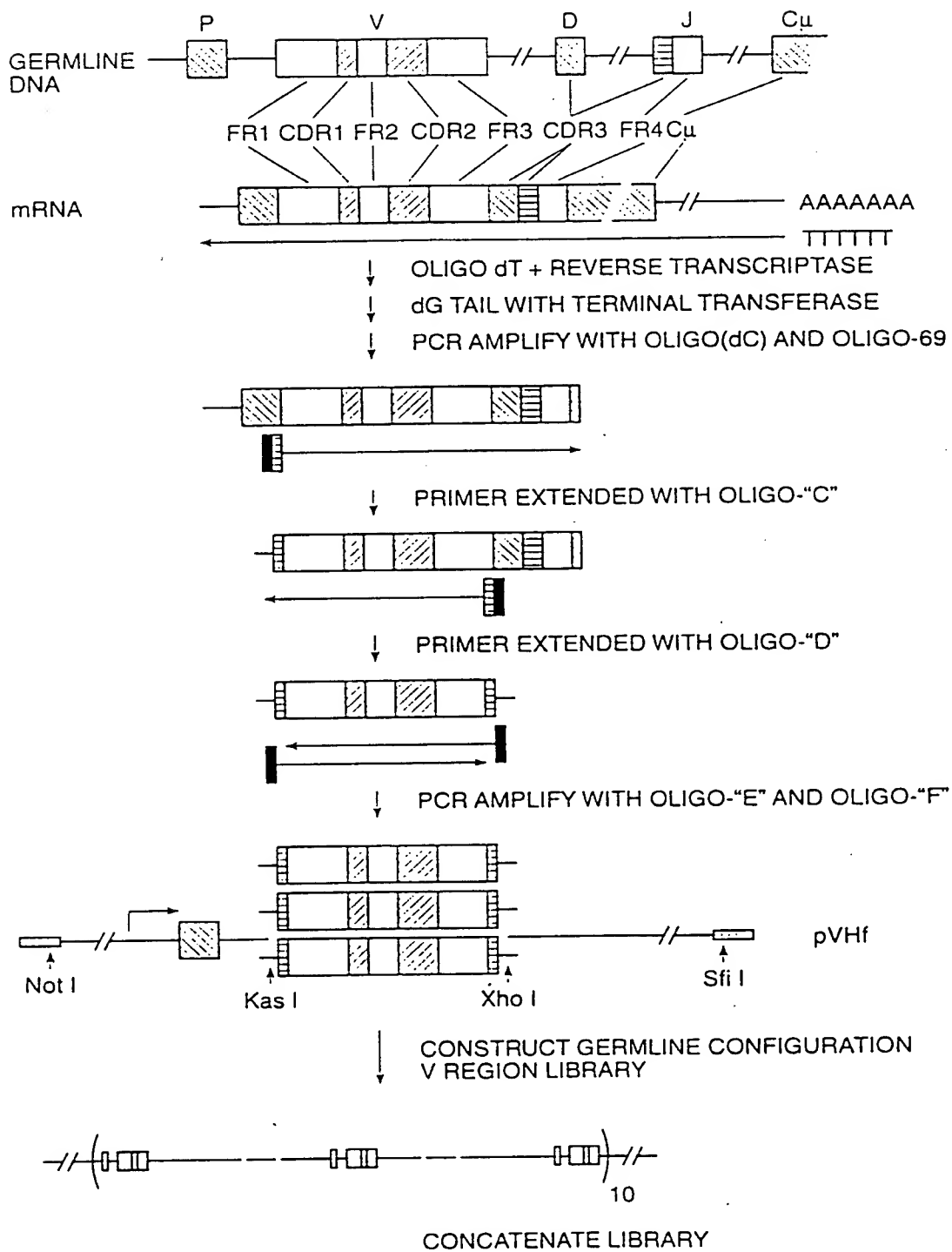


FIG. 29

008277"5964260

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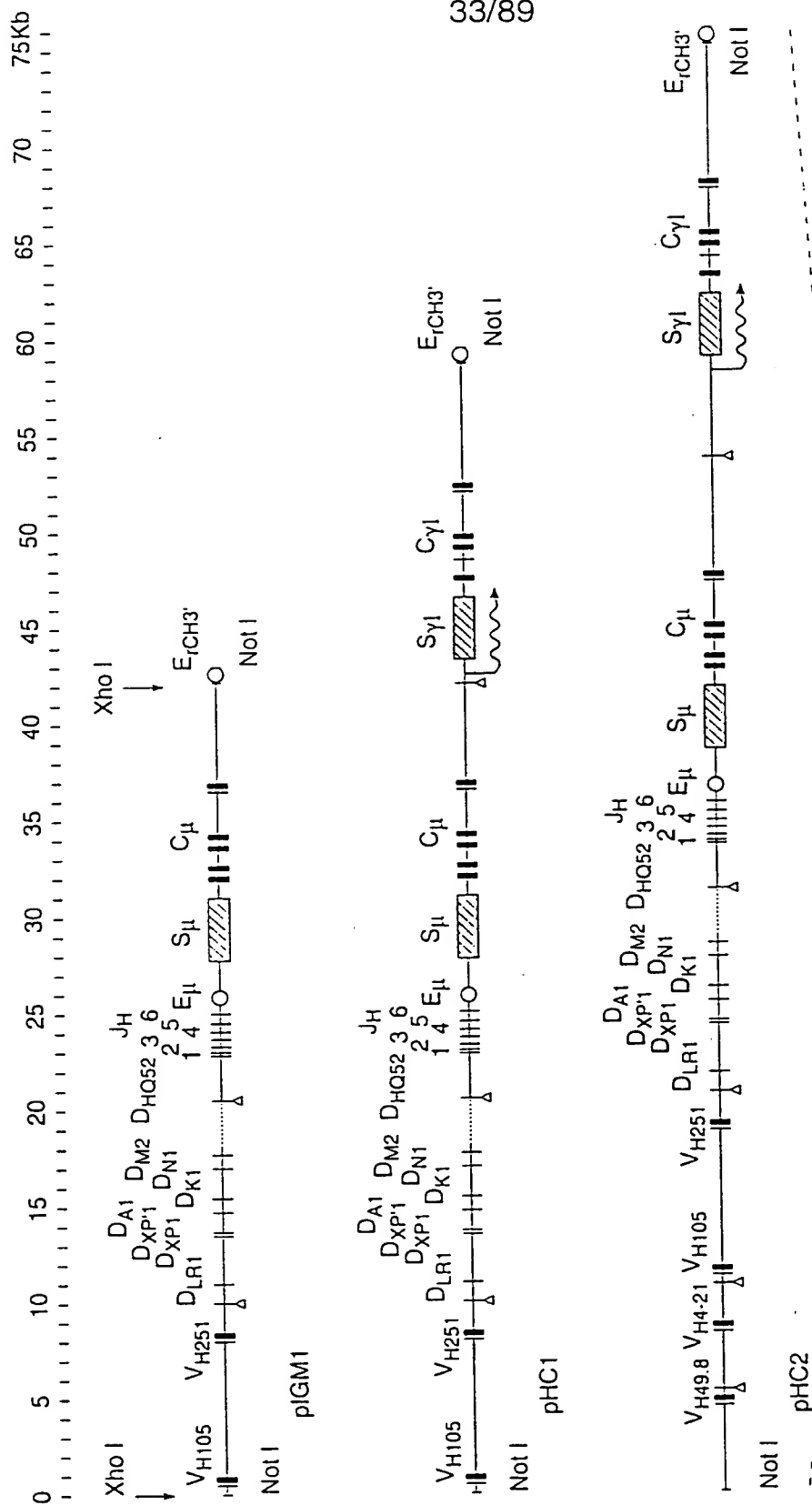
SYNTHETIC HEAVY CHAIN VARIABLE REGION

FIG. 30

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09-04-60 1200

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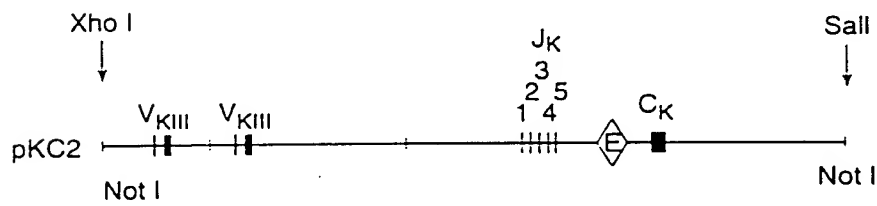
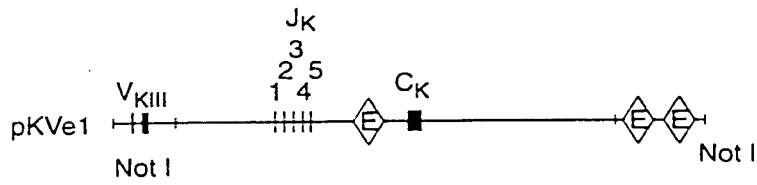
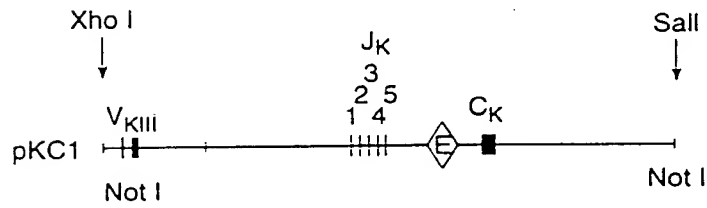
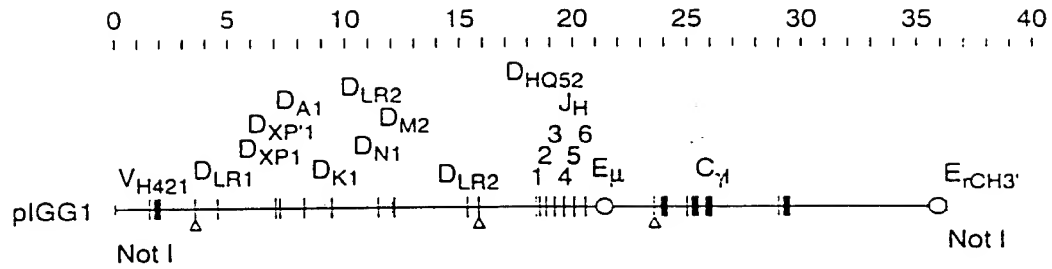


FIG. 32

008211 5964260

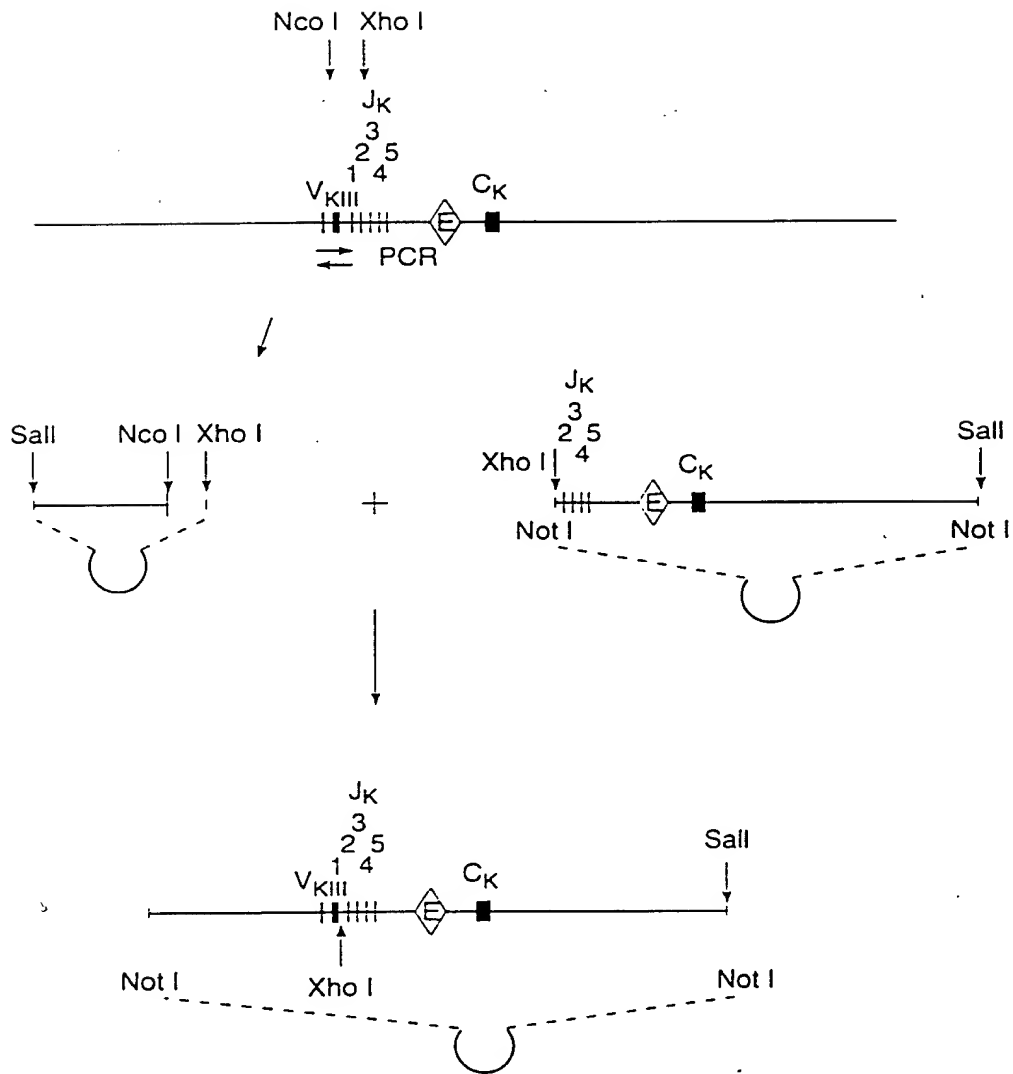


FIG. 33

008271" 59642/60

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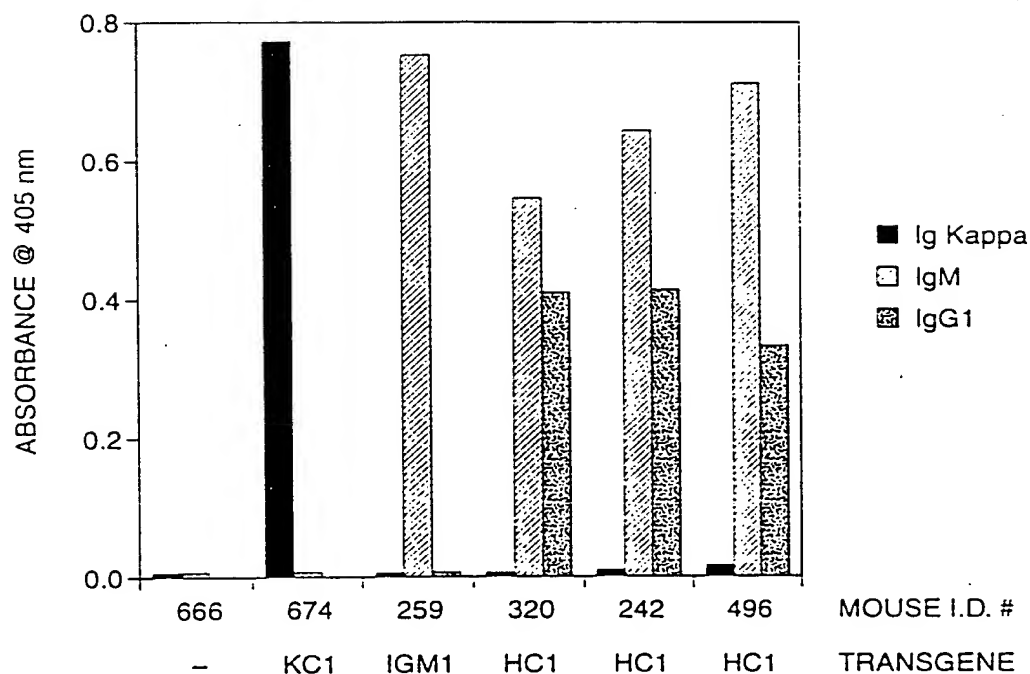


FIG. 34

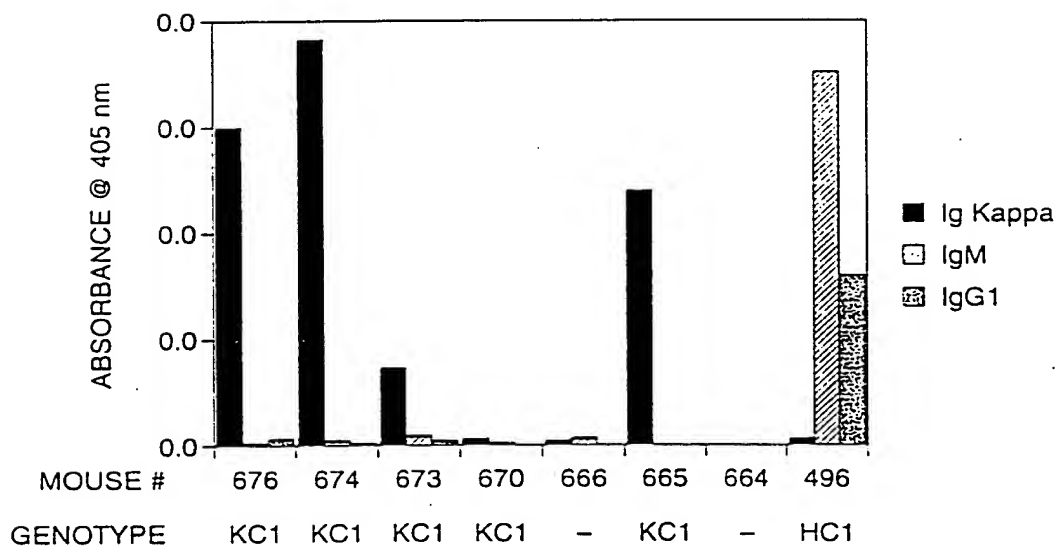


FIG. 35

008211" 59642260

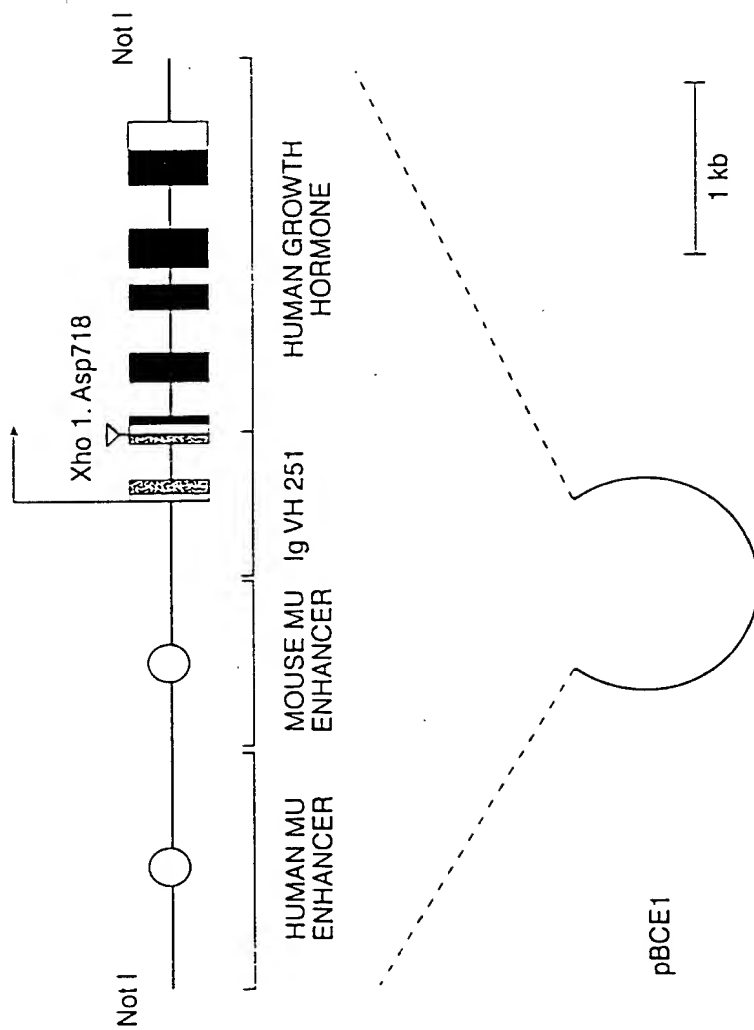


FIG. 36

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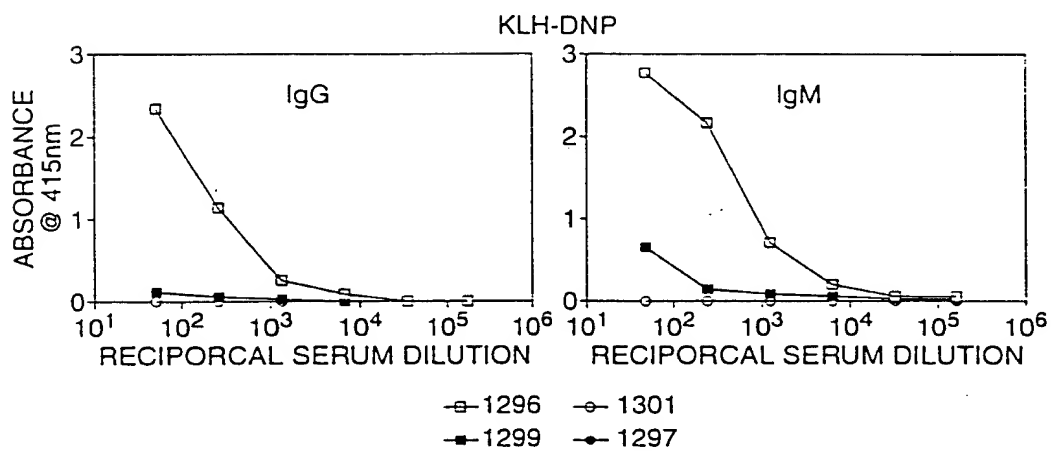


FIG. 37A

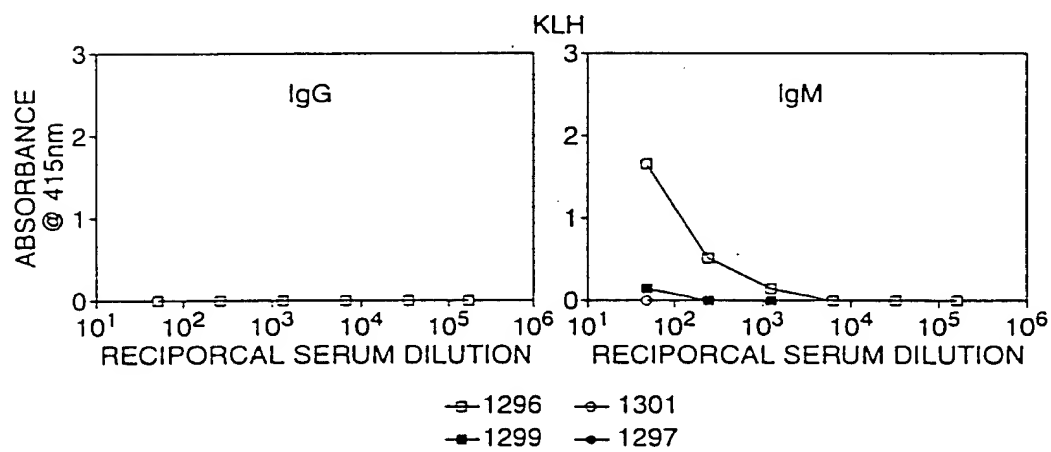


FIG. 37B

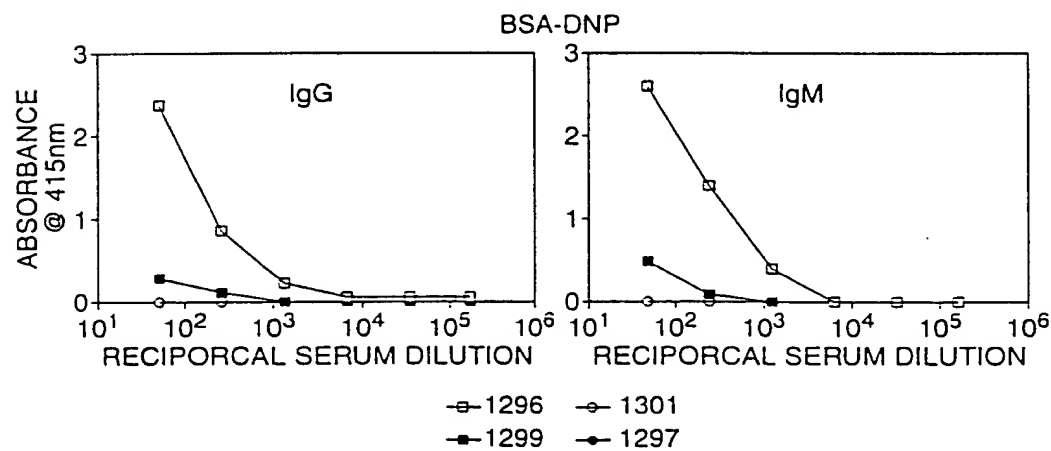


FIG. 37C

000277" 59672260

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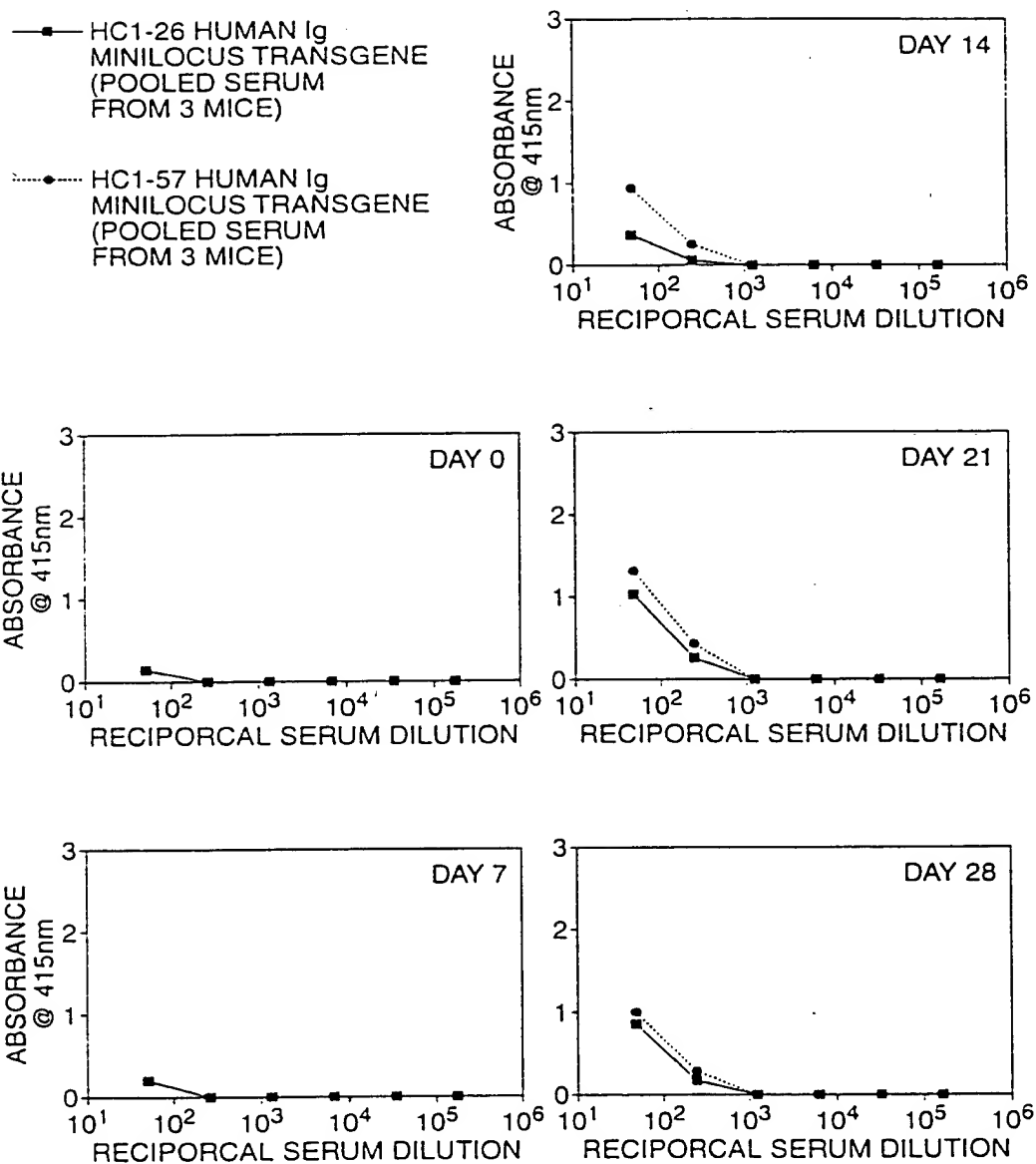


FIG. 38

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- HC1-26 HUMAN Ig
MINILOCUS TRANSGENE
(POOLED SERUM
FROM 3 MICE)
- HC1-57 HUMAN Ig
MINILOCUS TRANSGENE
(POOLED SERUM
FROM 3 MICE)

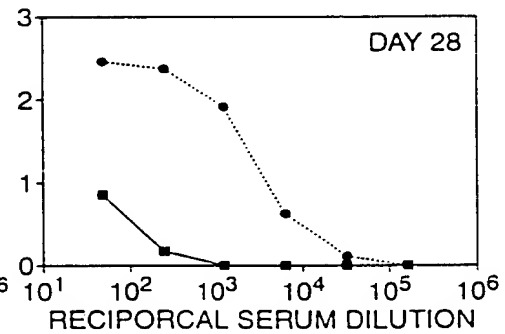
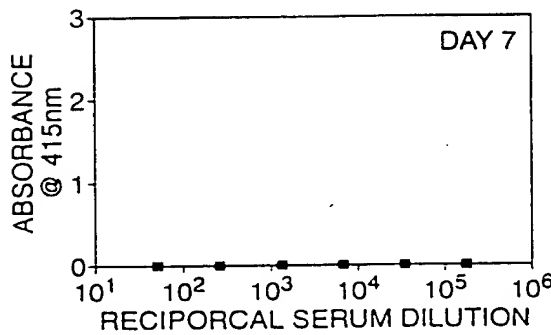
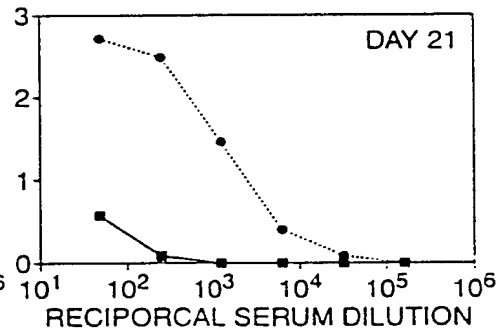
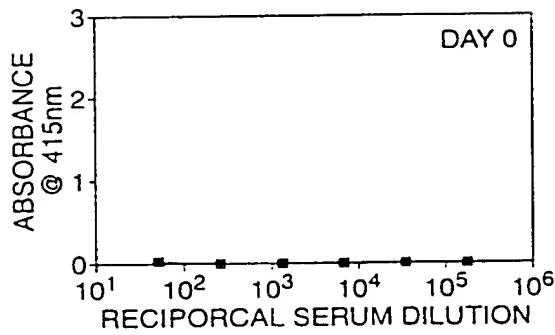
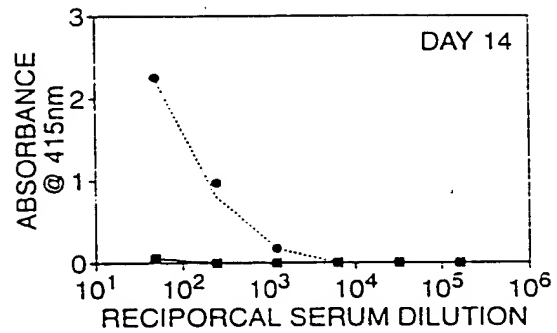


FIG. 39

003271-59542460

TTTTCTGGCC TGACAACCAG GGTGGCGCAG GATGCTCAGT GCAGAGAGGA 50
 AGAAGCAGGT GGTCTCTGCA GCTGGAAGCT CAGCTCCCAC CCAGCTGCTT 100
 TGCATGTCCC TCCCAGCTGC CCTACCTTCC AGAGCCATA TCAATGCCTG 150
 TGTCAGAGCC CTGGGGAGGA ACTGCTCAGT TAGGACCCAG AGGGAACCAT 200
 GGAAGCCCCA GCTCAGCTTC TCTTCCTCCT GCTACTCTGG CTCCCAGgtg 250
 tGluAlaPro AlaGlnLeuL euPheLeuLe uLeuLeuTrp LeuPro
 agggggaacc atgaggtggt tttgcacatt agtgaaaact cttgccacct 300
 ctgctcagca agaaatataa ttaaaattca aagtatatca acaatttttg 350
 ctctactcaa agacagttgg tttgatcttg attacatgag tgcatttctg 400
 ttttatttcc aatttcagAT ACCACCGGAG AAATTGTGTT GACACAGTCT 450
 Asp ThrThrGlyG luIleValLe uThrGlnSer
 CCAGCCACCC TGTCTTTGTC TCCAGGGGAA AGAGCCACCC TCTCCTGCAG 500
 ProAlaThrL euSerLeuSe rProGlyGlu ArgAlaThrL euSerCysAr
 GGCCAGTCAG AGTGTTAGCA GCTACTTAGC CTGGTACCAA CAGAAACCTG 550
 gAlaSerGln SerValSerS erTyrLeuAl aTrpTyrGln GlnLysProG
 GCCAGGCTCC CAGGCTCCTC ATCTATGATG CATCCAACAG GGCCACTGGC 600
 lyGlnAlaPr oArgLeuLeu IleTyrAspA laSerAsnAr gAlaThrGly
 ATCCCAGCCA GGTTCAAGTGG CAGTGGGTCT GGGACAGACT TCACTCTCAC 650
 IleProAlaA rgPheSerGl ySerGlySer GlyThrAspP heThrLeuTh
 CATCAGCAGC CTAGAGCCTG AAGATTTTGC AGTTTATTAC TGTCAGCAGC 700
 rIleSerSer LeuGluProG luAspPheAl aValTyrTyr CysGlnGlnA
 GTAGCAACTG GCCTCCCACA GTGATTCCAC ATGAAACAAA AACCCCAACA 750
 rgSerAsnTr pPro
 AGACCATCAG TGTTTACTAG ATTATTATAC CAGCTGCTTC CTTTACAGAC 800
 AGCTAGTGGG GT 812

FIG. 41

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AGGGCGGCGC AGATGCTCAG TGCAGAGAGA AGAAACAGGT GGTCTCTGCA 50
 GCTGGAAGCT CAGCTCCCAC CCCAGCTGCT TTGCATGTCC CTCCCAGCTG 100
 CCCTACCTTC CAGAGCCCAT ATCAATGCCT GGGTCAGAGC TCTGGGGAGG 150
 AACTGCTCAG TTAGGACCCA GACGGAACCA TGGGAAGCCCC AGCGCAGCTT 200
 CTCTTCCTCC TGCTACTCTG GCTCACAGgt gaggggaata tgagggtgtct 250
 LeuPheLeuL euLeuLeuTr pLeuThr
 ttgcacatca gtgaaaactc ctgccacctc tgctcagcaa gaaatataat 300
 taaaattcaa aatagatcaa caatthttggc tctactcaaa gacagtgggt 350
 ttgattttga ttacatgagt gcattttctgt tttattttcca atttcagATA 400
 AspT
 CCACCGGAGA AATTGTGTTG ACACAGTCTC CAGCCACCCT GTCTTTGTCT 450
 hrThrGlyGl uIleValLeu ThrGlnSerP roAlaThrLe uSerLeuSer
 CCAGGGGAAA GAGCCACCCT CTCCTGCAGG GCCAGTCAGG GTGTTAGCAG 500
 ProGlyGluA rgAlaThrLe uSerCysArg AlaSerGlnG lyValSerSe
 CTACTTAGCC TGGTACCAGC AGAAACCTGG CCAGGCTCCC AGGCTCCTCA 550
 rTyrLeuAla TrpTyrGlnG lnLysProGl yGlnAlaPro ArgLeuLeuI
 TCTATGATGC ATCCAACAGG GCCACTGGCA TCCCAGCCAG GTTCAGTGGC 600
 leTyrAspAl aSerAsnArg AlaThrGlyI leProAlaAr gPheSerGly
 AGTGGGCCTG GGACAGACTT CACTCTCACC ATCAGCAGCC TAGAGCCTGA 650
 SerGlyProG lyThrAspPh eThrLeuThr IleSerSerL euGluProGl
 AGATTTTGCA GTTTATTACT GTCAGCAGCG TAGCAACTGG CATCCCACAG 700
 uAspPheAla ValTyrTyrC ysGlnGlnAr gSerAsnTrp His
TGATTCCACA TGAAACAAAA ACCCCAACAA GACCATCAGT GTTTACTAGA 750
 TTATTATACC AGCTGCTTCC TTTACAGACA GCTAGTGGGG TGGCCACTCA 800
 GTGTTAGCAT CTCAGCTCTA TTTGGCCATT TTGGAGTTCA AGTTGTCAAG 850
 TCCAAAATTA CTTATGTTAG TCCATTGCAT CATACCATTT CAGTGTGGCT 900

FIG. 42

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CCGCCCCAGC TGCTTTGCAT GTCCCTCCCA GCCGCCCTGC AGTCCAGAGC 50

CCATATCAAT GCCTGGGTCA GAGCTCTGGA GAAGAGCTGC TCAGTTAGGA 100

ACCCCAGAGG GAACCATGGA AACCCCAGCG CAGCTTCTCT TCCTCCTGCT 150
MetGl uThrProAla GlnLeuLeuP heLeuLeuLe

ACTCTGGCTC CCAGgtgagg ggaacatggg atggttttgc atgtcagtga 200
uLeuTrpLeu Pro

aaaccctctc aagtcctggt acctggcaac tctgctcagt caatacaata 250

attaaagctc aatataaagc aataattctg gctcttctgg gaagacaatg 300

ggtttgattht agattacatg ggtgacttht ctgtttttatt tccaatctca 350

gATACCACCG GAGAAATTGT GTTGACGCAG TCTCCAGGCA CCCTGTCTTT 400
AspThrThrG lyGluIleVa lLeuThrGln SerProGlyT hrLeuSerLe

GTCTCCAGGG GAAAGAGCCA CCCTCTCCTG CAGGGCCAGT CAGAGTGTTA 450
uSerProGly GluArgAlaT hrLeuSerCy sArgAlaSer GlnSerValS

GCAGCAGCTA CTTAGCCTGG TACCAGCAGA AACCTGGCCA GGCTCCCAGG 500
erSerSerTy rLeuAlaTrp TyrGlnGlnL ysProGlyGl nAlaProArg

CTCCTCATCT ATGGTGCATC CAGCAGGGCC ACTGGCATCC CAGACAGGTT 550
LeuLeuIleT yrGlyAlaSe rSerArgAla ThrGlyIleP roAspArgPh

CAGTGGCAGT GGGTCTGGGA CAGACTTCAC TCTCACCATC AGCAGACTGG 600
eSerGlySer GlySerGlyT hrAspPheTh rLeuThrIle SerArgLeuG

AGCCTGAAGA TTTTGCAGTG TATTACTGTC AGCAGTATGG TAGCTCACCT 650
luProGluAs pPheAlaVal TyrTyrCysG lnGlnTyrGl ySerSerPro

CCACAGTGA TTCAGCTTGA AACAAAAACG TCTGCAAGAC CTTCATTGTT 700

TACTAGATTA TACCAGCTGC TTCCTTTACA GATAGCTGCT GCAATGACAA 750

CTCAATTTAG CATCTCTCTC TGCTTGGGCA TTTTGGGGAT CTAAAAAAG 800

TAATCCCTTG ATATATTTTT GACTCTGATT CCTGCATTTT TCCTCAGACC 850

AAGATGGACA GCCAGGTTTA AGCACAGTTT CACAGTAATG GCCACTGGAT 900

FIG. 43

00221" 595h2450

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AAACACATTC TCTGCAGACA AATTTGAGCT ACCTTGATCT TACCTGGACA 50
 GGTGGGGACA CTGAGCTGGT GCTGAGTTAC TCAGATGCGC CAGCTCTGCA 100
 GCTGTGCCCCA GCCTGCCCCA TCCCCTGCTC ATTTGCATGT TCCCAGAGCA 150
 CAACCTCCTG CCCTGAAGCC TTATTAATAG GCTGGTCAGA CTTTGTGCAG 200
 GAATCAGACC CAGTCAGGAC ACAGCATGGA CATGAGGGTC CTCGCTCAGC 250
 TCCTGGGGCT CCTGCTGCTC TGTTCCTCAG gtaaggatgg agaacactag 300
 euLeuGlyLe uLeuLeuLeu CysPhePro
 cagtttactc agcccagggt gctcagtact gctttactat tcagggaaat 350
 tctcttaca catgattaat tgtgtggaca tttgttttta tgtttccaat 400
 ctcagGTGCC AGATGTGACA TCCAGATGAC CCAGTCTCCA TCCTCACTGT 450
 GlyAla ArgCysAspI leGlnMetTh rGlnSerPro SerSerLeuS
 CTGCATCTGT AGGAGACAGA GTCACCATCA CTTGTCTGGG CAGTCAGGGT 500
 erAlaSerVa lGlyAspArg ValThrIleT hrCysArgAl aSerGlnGly
 ATTAGCAGCT GGTAGCCTG GTATCAGCAG AAACCAGAGA AAGCCCCCTAA 550
 IleSerSerT rpLeuAlaTr pTyrGlnGln LysProGluL ysAlaProLy
 GTCCCTGATC TATGCTGCAT CCAGTTTGCA AAGTGGGGTC CCATCAAGGT 600
 sSerLeuIle TyrAlaAlaS erSerLeuGl nSerGlyVal ProSerArgP
 TCAGCGGCAG TGGATCTGGG ACAGATTTC CTCTCACCAT CAGCAGCCTG 650
 heSerGlySe rGlySerGly ThrAspPheT hrLeuThrIl eSerSerLeu
 CAGCCTGAAG ATTTTGCAAC TTATTACTGC CAACAGTATA ATAGTTACCC 700
 GlnProGluA spPheAlaTh rTyrTyrCys GlnGlnTyrA snSerTyrPr
 ACCCACAGTG TTACACACCC AAACATAAAC CCCAGGGAA GCAGATGTGT 750
 o
 GAGGCTGGGC TGCCCCAGCT GCTTCTCCTG ATGCCTCCAT CAGCTGAGAG 800
 TGTTCTCAG ATGCAGCCAC ACTCTGATGG TGTTGGTAGA TGGGGAC 847

FIG. 44

09724965-112800

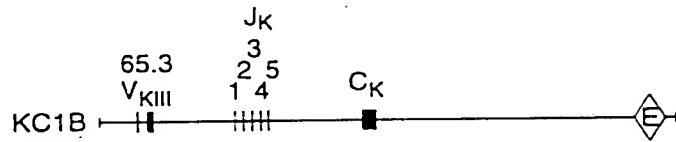


FIG. 45

008211 5954260

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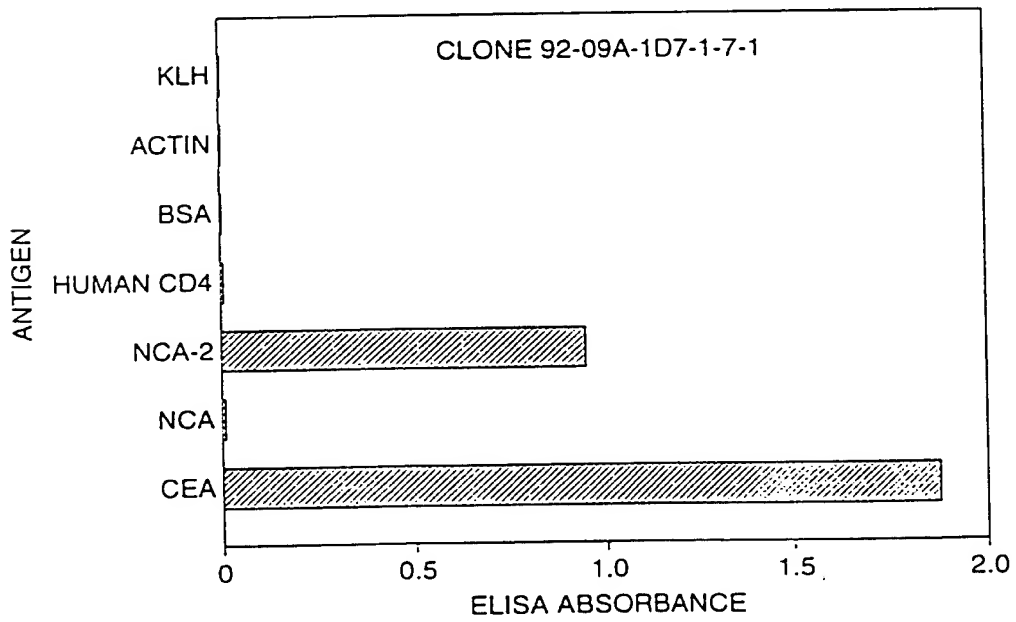
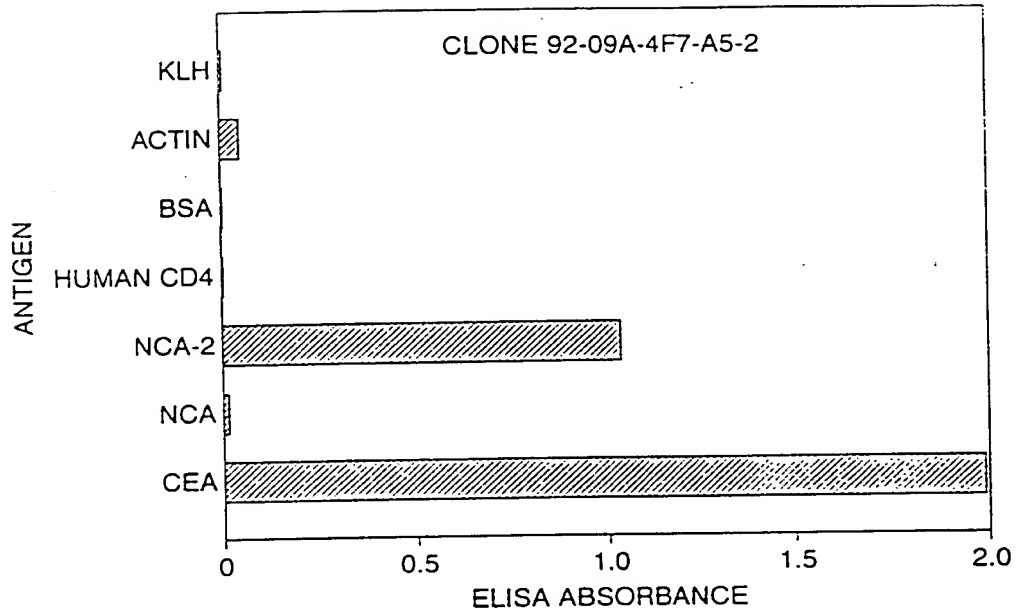


FIG. 46

00821 5964260

	WH251	HUMAN n d n	J	HOUSE Cy
5 DXP'1 J6 G1	GCCTCGACACCGCCATGTATTACTGTGCAGA	catttATGTTGGGAGTTAcg	CGGTgTGAAGCTCTGGGGCAAGGGACACGGTCACCGTCCTCTCAG	CCAAACGACACCCCCCATCTGTCTATCCACT
7 DHQ52 J3 G1	GCCTCGACACCGCCATGTATTACTGTGCAGA	cACTGGGcattggat	GCCTcTTGAAGTCTGGGGCAAGGGACAAATGcTACCgTCTTTcAG	CCAAACGACACCCCCCATCTGTCTATCCACT
2 DHQ52 J3 G2b	GCCTCGACACCGCCATGTATTACTGTGCAGA	ACTGGGcAtgat	GCCTTTGATATCTGGGGCAAGGGACAAATGGTCACCGTCTCTTcAG	CCAAACGACACCCCCCATCTGTCTATCCACT
3 D7 J3 G2b	GacTTCGACACCGCCATGTATTACTGTGCAGA	caggggagagat	GCCTTTAGATATCTGGGGCAAGGGACAAATGGTCACCGTCTCTTcAG	CCAAACGACACCCCCCATCTGTCTATCCACT
4 DXP'1 J4 G2b	GCCTCGACACCGCCATGTATTACTGTGCAGA	catagggACTATatTTcGGGAGTTATtccc	TGACTACTGGGGCAAGGGACCTTGGTCACCGTCTCTTcAG	CCAAACGACACCCCCCATCTGTCTATCCACT
10 DHQ52 J3 G2b	GCCTCGACACCGCCATGTATTACTGTGCAGA	ACTGGGcAtgat	GCCTTTGATATCTGGGGCAAGGGACAAATGGTCACCGTCTCTTcAG	CCAAACGACACCCCCCATCTGTCTATCCACT
1 D? J3 G3	GCCTCGACACCGCCATGTATTACTGTGCAGA	catagggtctatg	GATATCTGGGGCAAGGGACAAATGGTCACCGTCTCTTcAG	CTAACACACAGCCCCCATCTGTCTATCCCTT
6 DHQ52 J4 G3	GCCTCGACACCGCCATGTATTACTGTGCAGA	gagggcggtcACTGGGcAtcg	TTTGACTATcTGGGGCAAGGGACCTTGGTCACCGTCTCTTcAG	CTAACACACAGCCCCCATCTGTCTATCCCTT
8 DIR2 J3 G3	GCCTCGACACCGCCATGTATTACTGTGCAGA	agggACTCCctgat	GCCTTTGATATCTGGGGCAAGGGACAAATGGTCACCGTCTCTTcAG	CTAACACACAGCCCCCATCTGTCTATCCCTT
9 DIR2r J6 G3	GCCTCGACACCGCCATGTATTACTGTGCAGA	cggGGGcCT	TACTACTACTAGGTATGAAGTCTGGGGCAAGGGACACAGGTcACCGTCTCTTcAG	CTAACACACAGCCCCCATCTGTCTATCCCTT

FIG. 47

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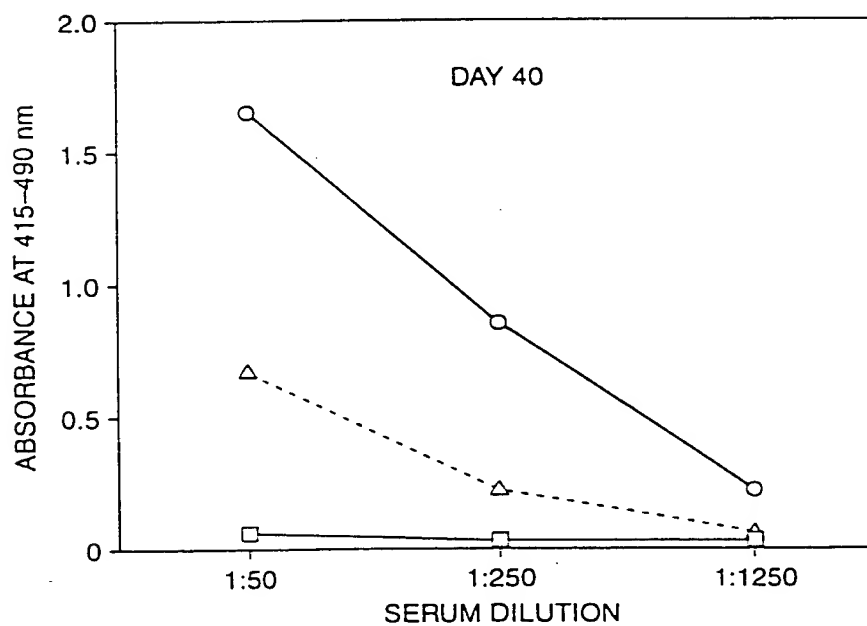
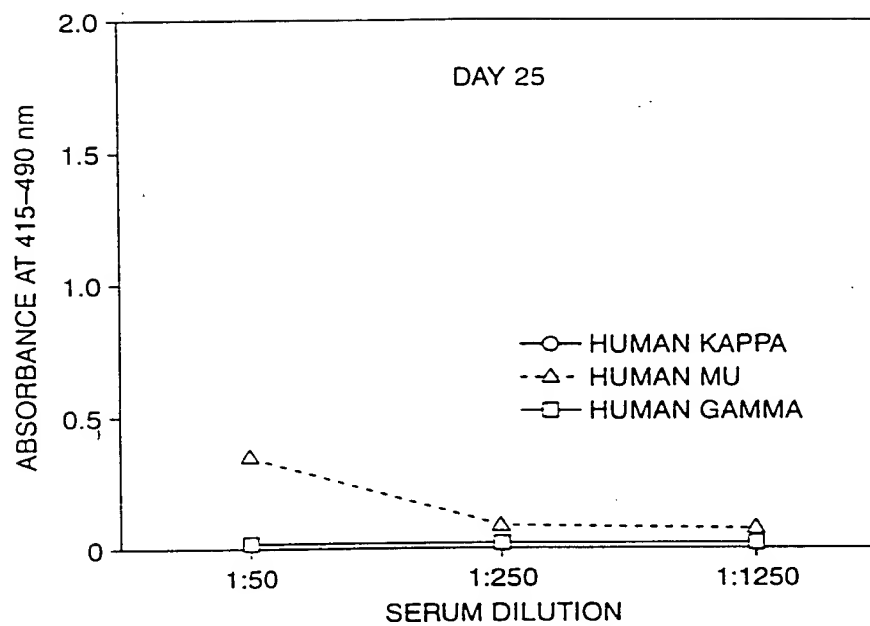


FIG. 48

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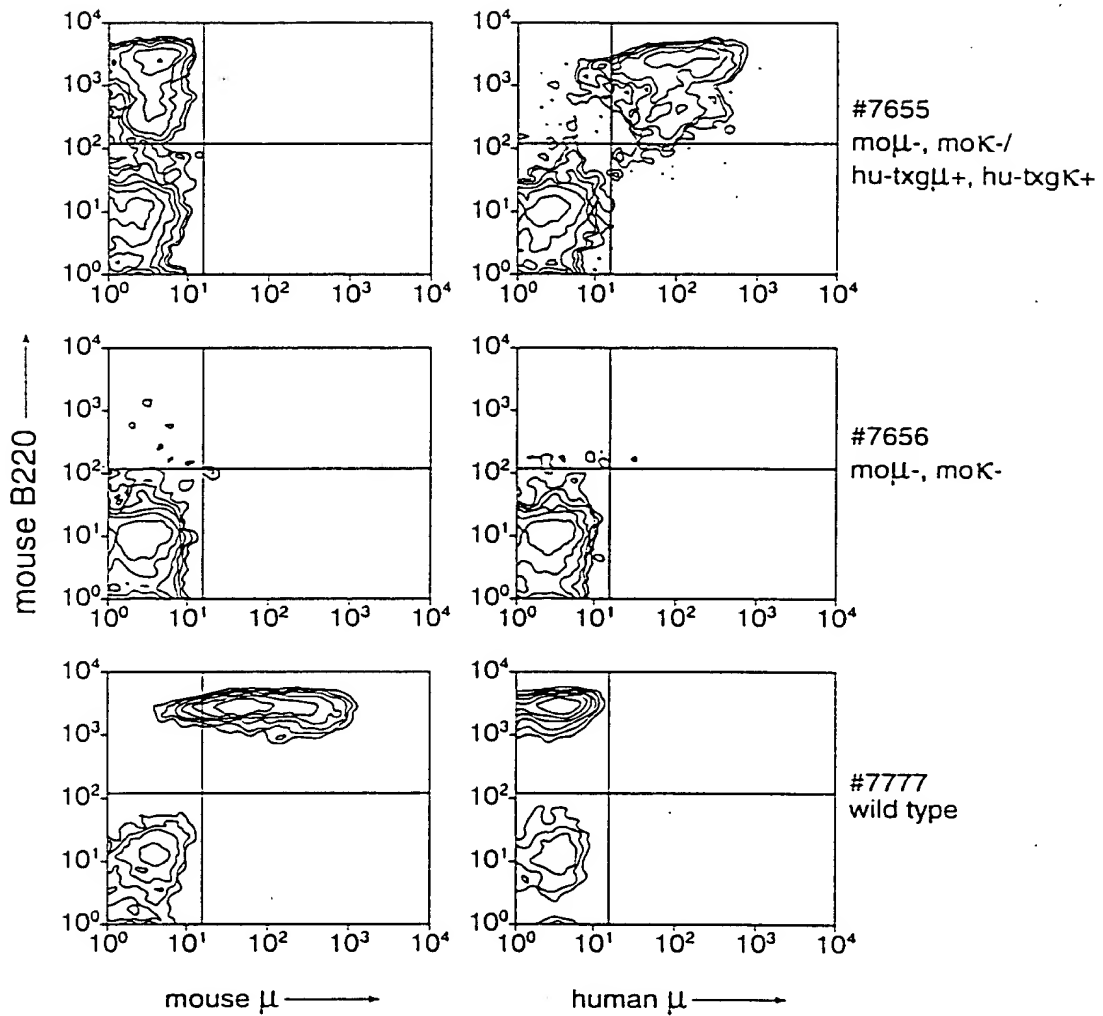


FIG. 49

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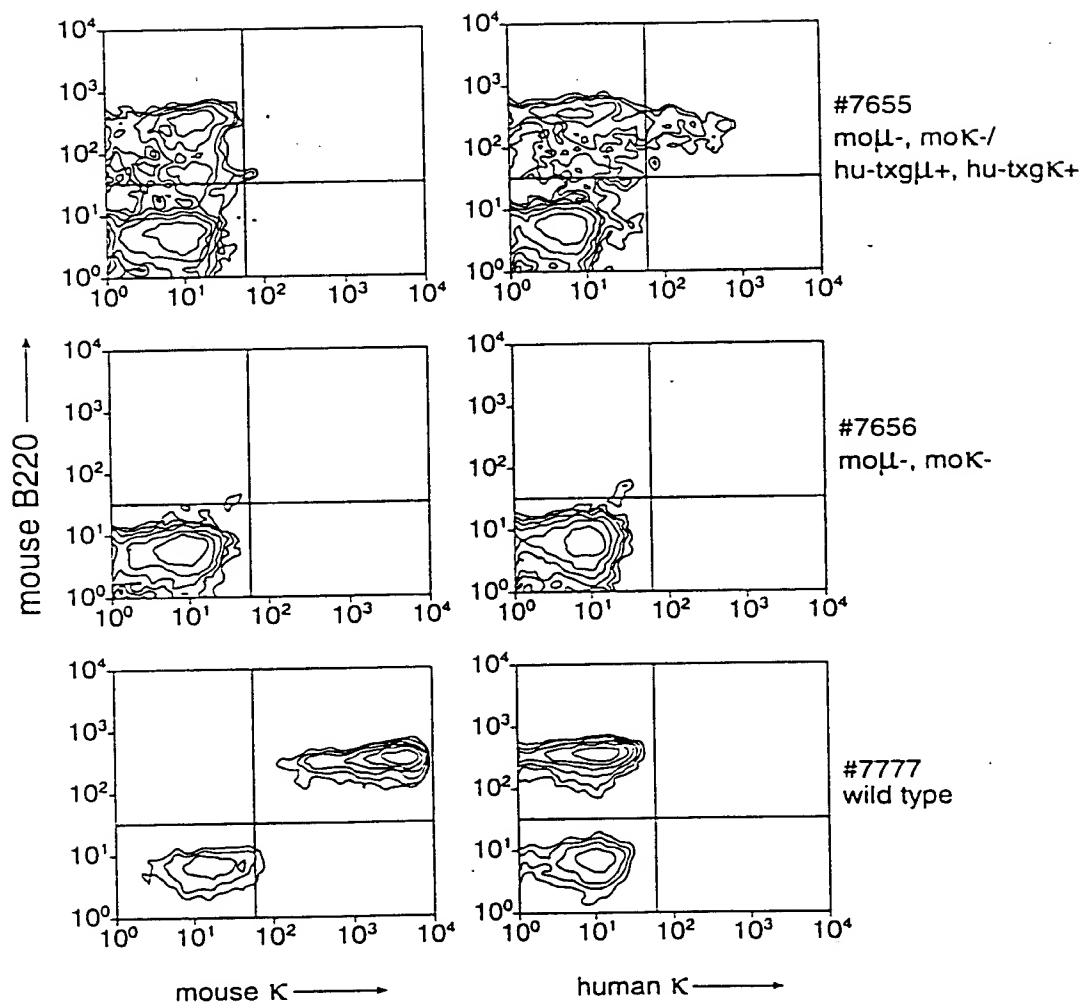


FIG. 50

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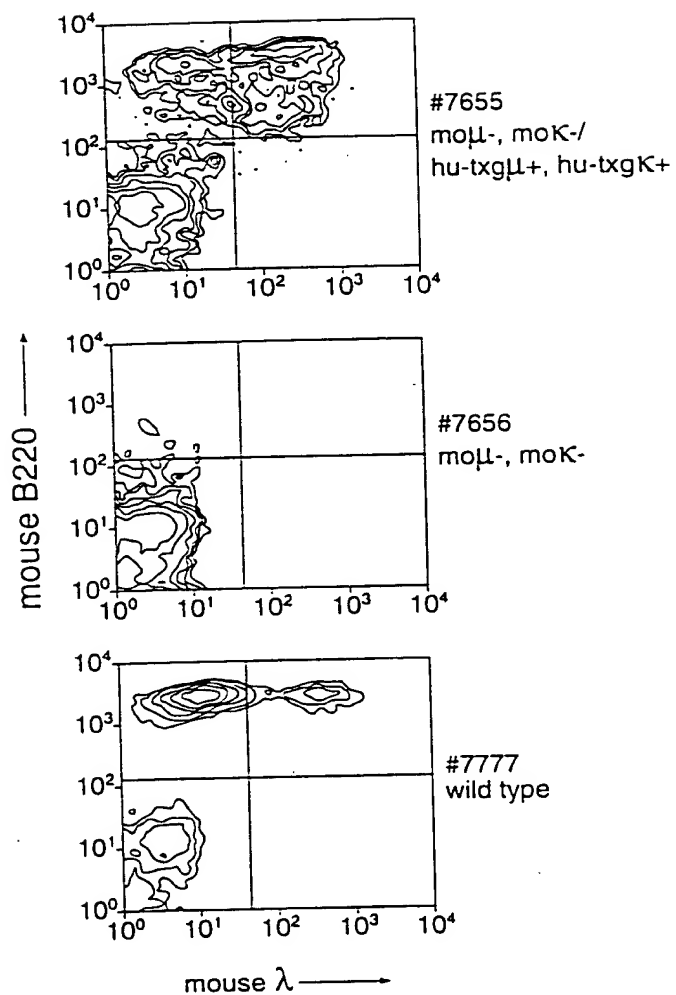


FIG. 51

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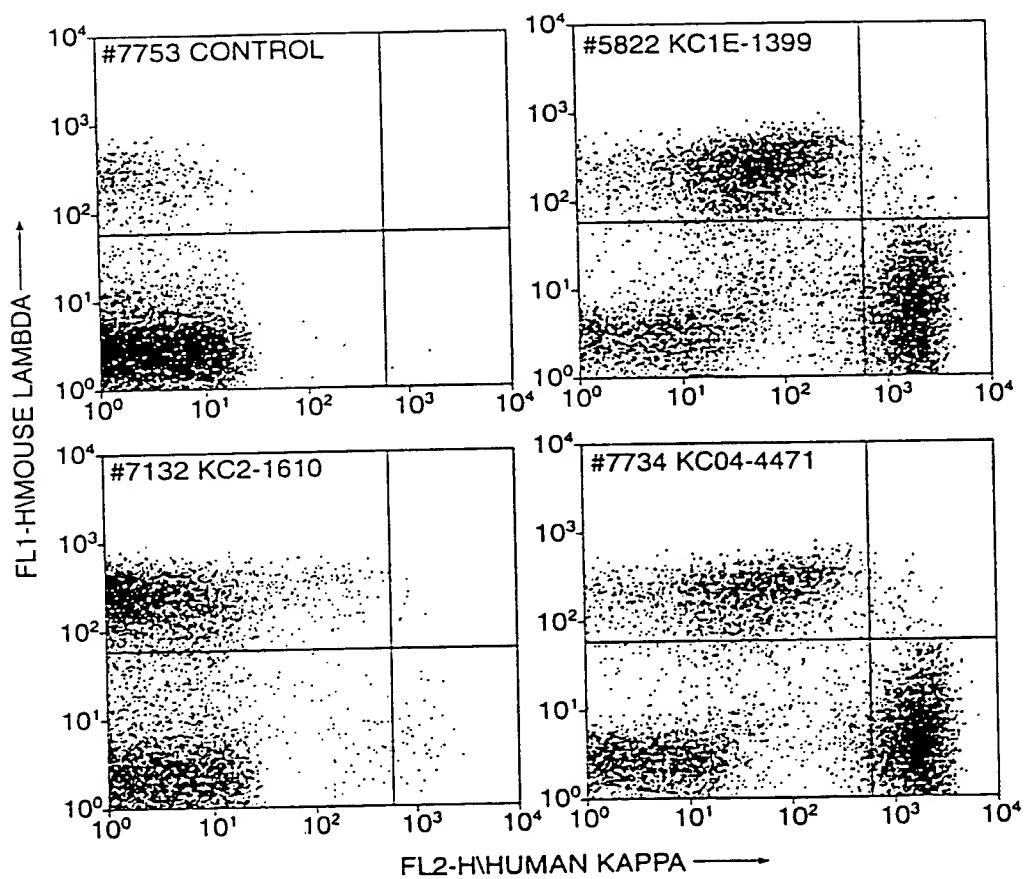


FIG. 52

003211 59642/60

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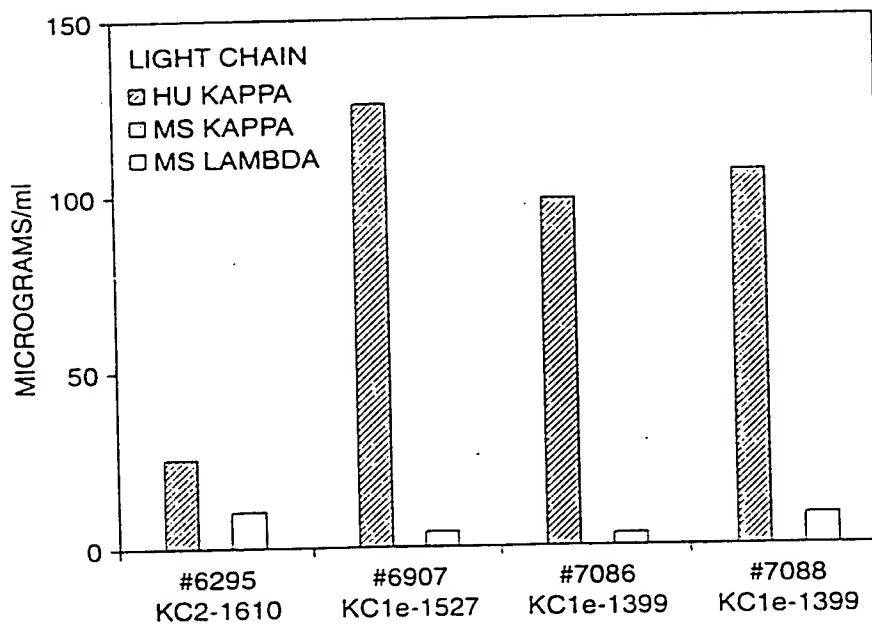
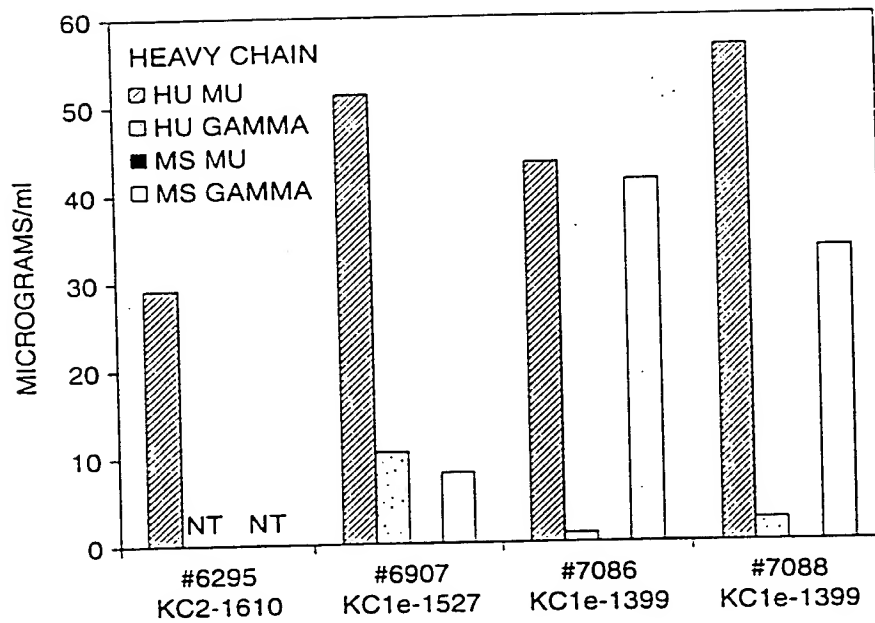


FIG. 53

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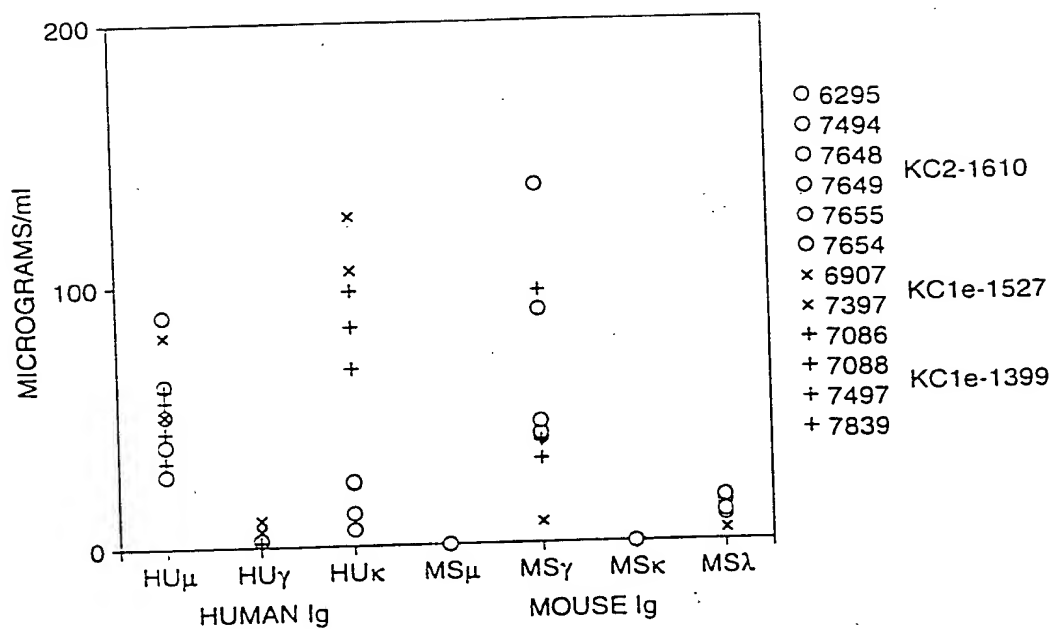


FIG. 54

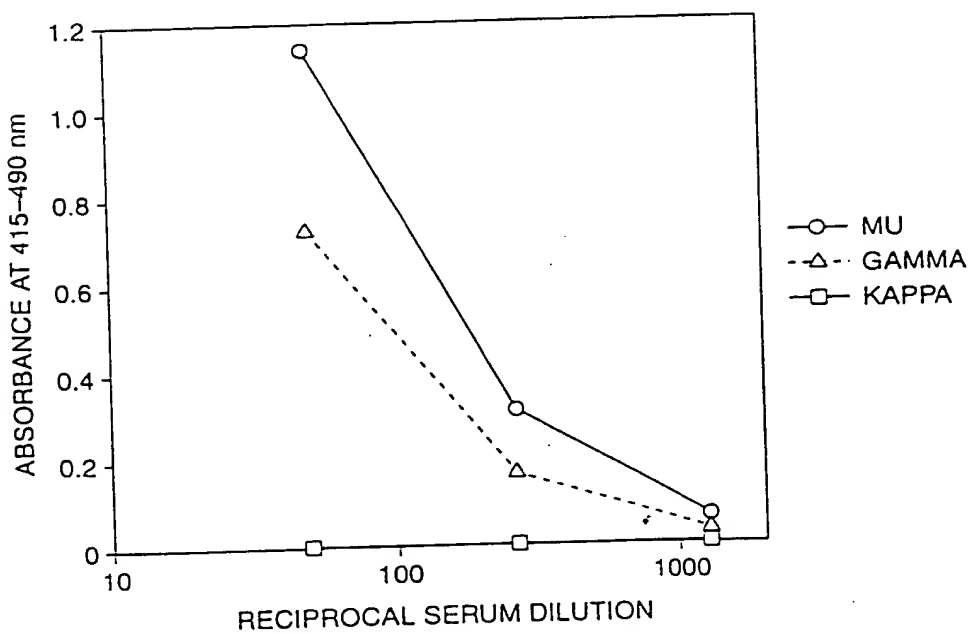


FIG. 55

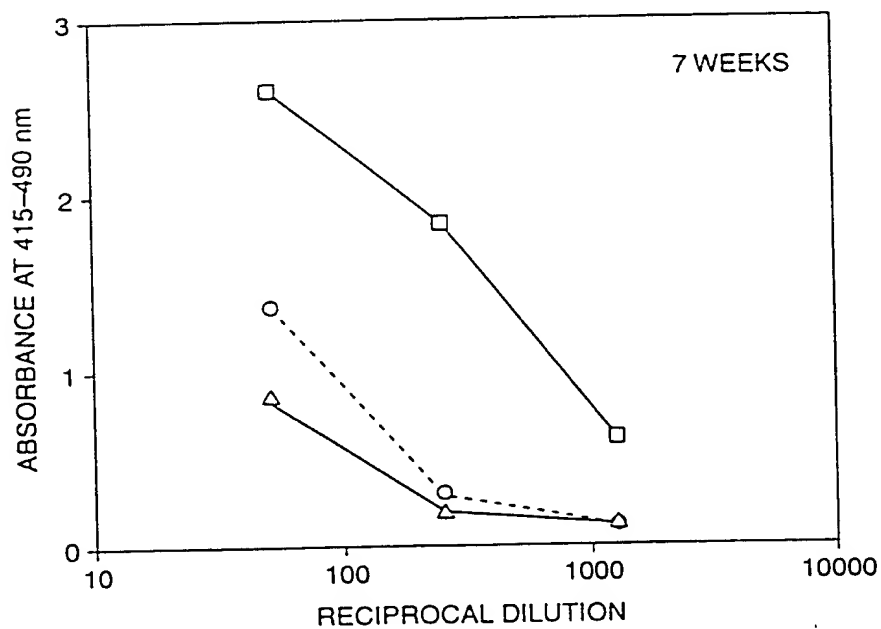
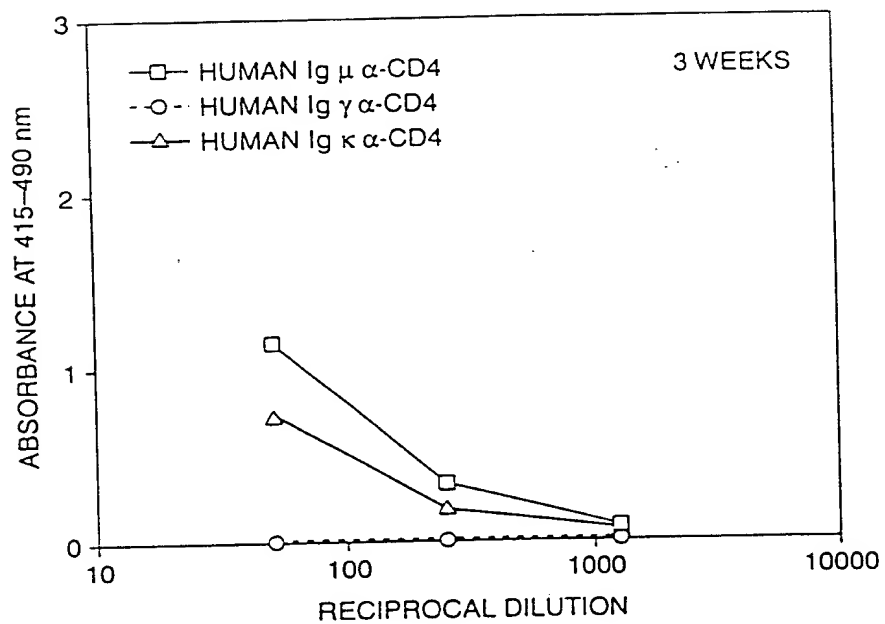
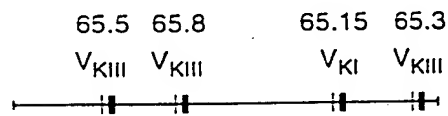
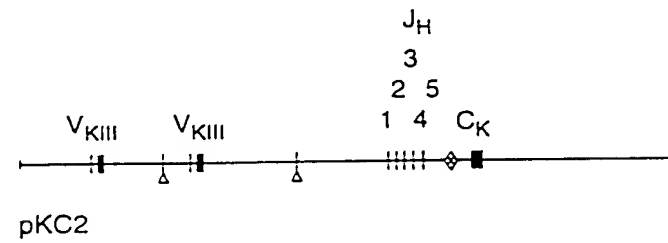
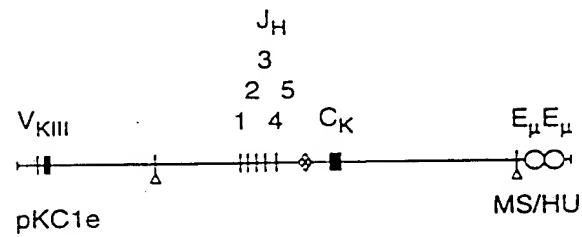
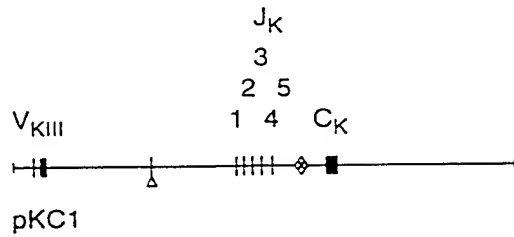


FIG. 56

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0 5 10 15 20 25 30 35 40 45Kb

LIGHT CHAIN MINILOC1



X

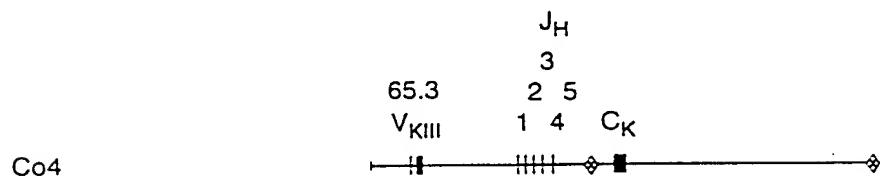


FIG. 57A

000211 5964260

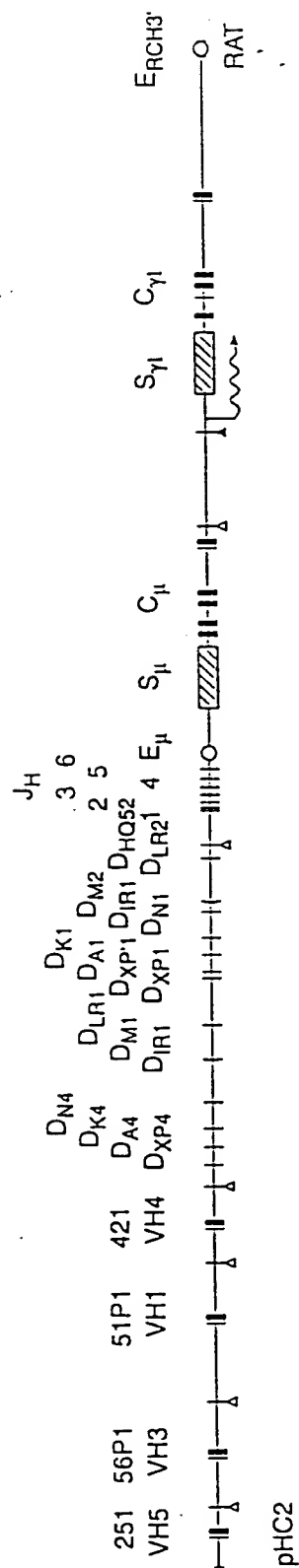
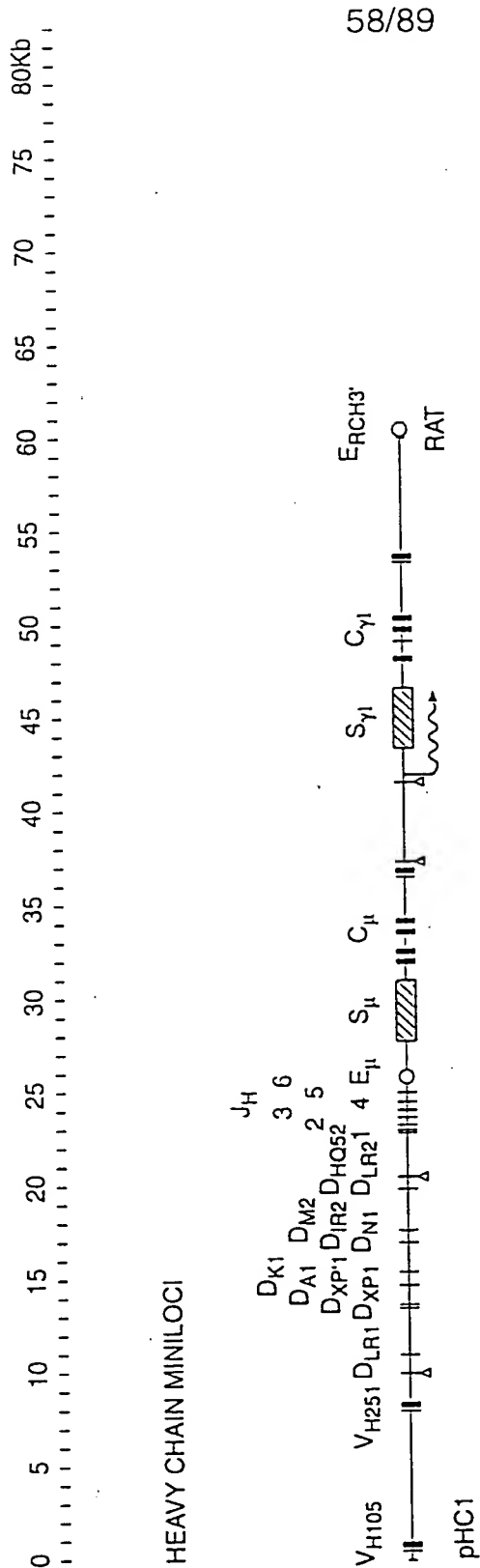


FIG. 57B

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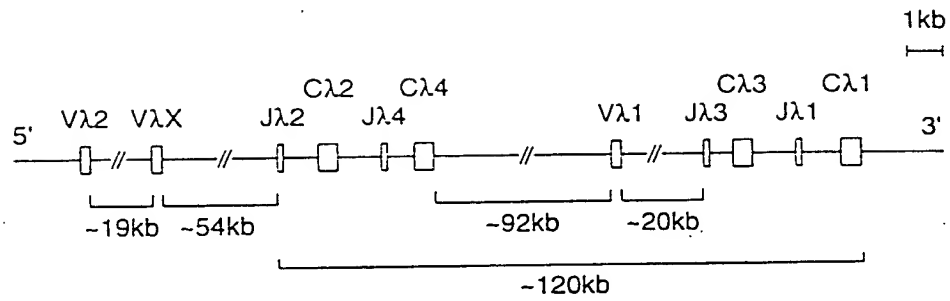
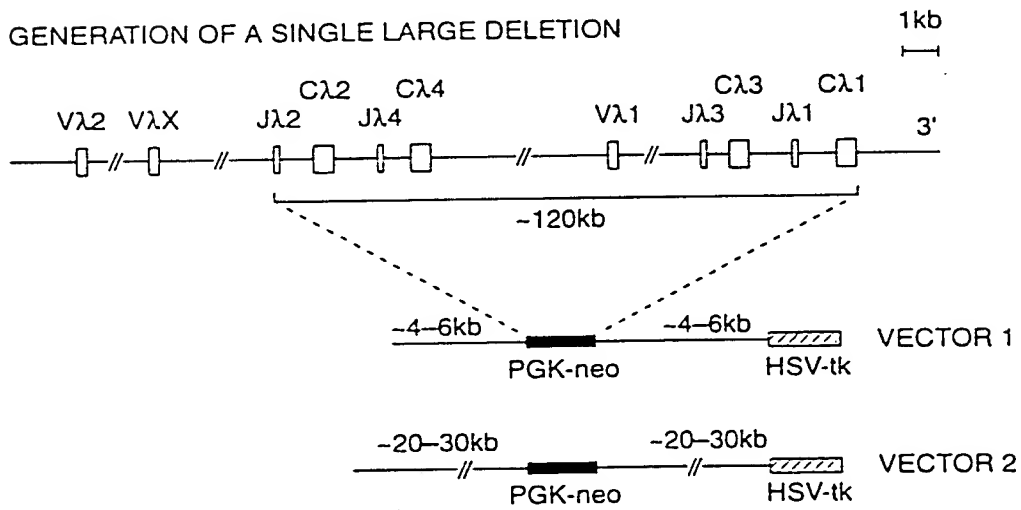


FIG. 58

GENERATION OF A SINGLE LARGE DELETION



GENERATION OF TWO SMALL DELETIONS

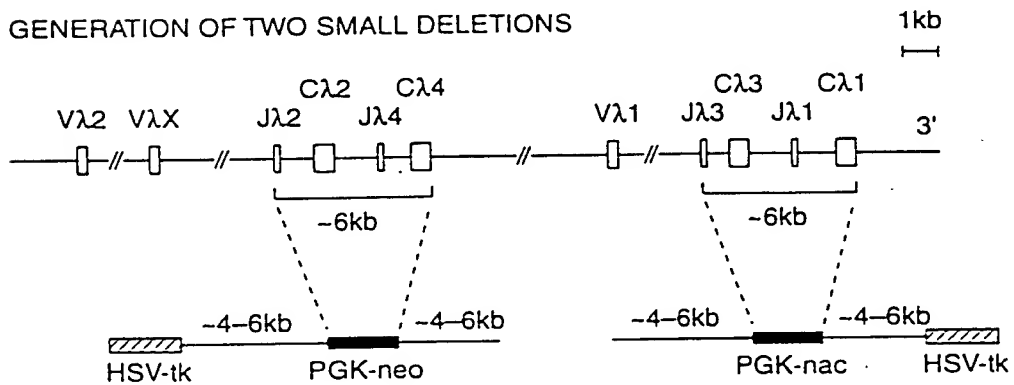


FIG. 59

003211 5964260

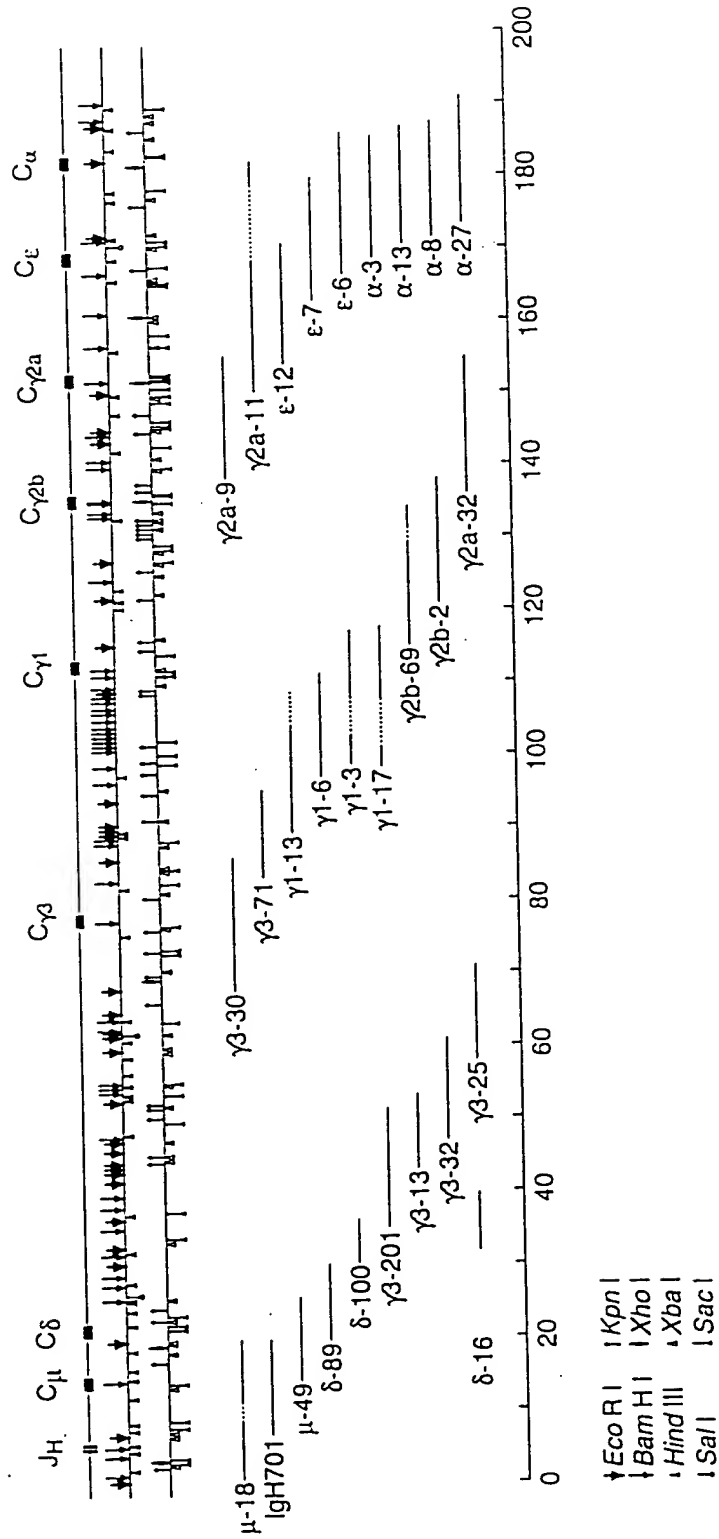


FIG. 60

CGAGAGGGGCGGGGGAAGACTACTATCCCAGGCAGGTTTTAGGTTCCAGAGTCTGCGAG
AAATCCCACCATCTACCCACTGACACTCCCACCAGTCCTGTGCAGTGATCCCGTGATAAT
CGGCTGCCTGATTACGATTACTTCCCTTTCGGCACGATGAATGTGACCTGGGGAAAGAG
TGGGAAGGATATAACCACCGTGAACCTTCCACCTGCCCTCGCCTCTGGGGGACGGTACAC
CATGAGCAGCCAGTTAACCCTGCCAGCTGTGAGTGCCGAGAGGAGAGTCCGTGAAATG
TTCCGTGCAACATGACTCTAACCCCGTCCAAGAATTGGATGTGAATTGCTCTGGTAAAGA
ACGTTAGGGGGTCAGCTAGGGGTGGGATAAGTCCTACCTTATCTAGATCCATATATCCCT
CTGATGCACACCCTCACAGGAATCCCTCAGAAACCTCCACTATGGGGATTGGGGGAAGGA
AGCGTAAACAGGTCTAGAAGGAGCTGGAGGCCTCAGAACATCCAGAAACGGGGACAGCAA
AGGAGACAAGGAGAATATACTGATTTGCTAGGACATCTTCTGTTACAGGTCCTACTCCTC
CTCCTCCTATTACTATTCTTCTGCCAGCCCAGCCTGTCACTGCAGCGCCAGCTCTTG
AGGACCTGCTCCTGGGTTGAGATGCCAGCATCACATGTAATGTCCTGAGAAATC
CTGAGGGAGCTGCTTTCACCTGGGAGCCCTCCACTGGGAAGGATGCAGTGCAGAAAGAAAG
CTGCGCAGAATTCTGCGGCTGCTACAGTGTGTCCAGCGTCTGCCTGGCTGTGCTGAGC
GCTGGAACAGTGGCGCATCATTCAAGTGACAGTTACCCATCCTGAGTCTGGCACCTTAA
CTGGCACAATTGCCAAAGTCACAGGTGAGCTCAGATGCATACCAGGACATTGTATGACGT
TCCCTGCTCACATGCCTGCTTCTTCTTATAATACAGATGCTCAACTAACTGCTCATGTC
CTTATATCACAGAGGGAAATTGGAGCTATCTGAGGAACTGCCCAGAAAGGGAAGGGCAGAG
GGGTCTTGCTCTCCTTGTCTGAGCCATAACTCTTCTTTCTACCTTCCAGTGAACACCTTC
CCACCCCAGGTCCACCTGCTACCGCCGCGTCCGAGGAGCTGGCCCTGAATGAGCTCTTG
TCCCTGACATGCCTGGTGGGAGCTTTCAACCCTAAAGAAGTGCTGGTGGGATGGCTGCAT
GGAAATGAGGAGCTGTCCCAGAAAGCTACCTAGTGTTTGAGCCCCTAAAGGAGCCAGGC
GAGGGAGCCACCACCTACCTGGTGACAAGCGTGTTGCGTGTATCAGCTGAAACCTGGAAA
CAGGGTGACCAGTACTCCTGCATGGTGGGCCACGAGGCCTTGCCCATGAACCTCACCCAG
AAGACCATCGACCGTCTGTGGGTAAACCCACCAATGTCAGCGTGTCTGTGATCATGTCA
GAGGGAGATGGCATCTGCTACTGAGCCACCCTGCCTGTCCCTACTCCTAGAATAAACTCT
GTGCTCATCCAAAGTATCCCTGCACTTCCACCCAGTGCCTGTCCACCACCCTGGGGTCTA
CGAAACACAGGGAGGGGTCAGGGGCCAGGGAGGGAGAAATACCACCACCTAAGC

FIG. 61

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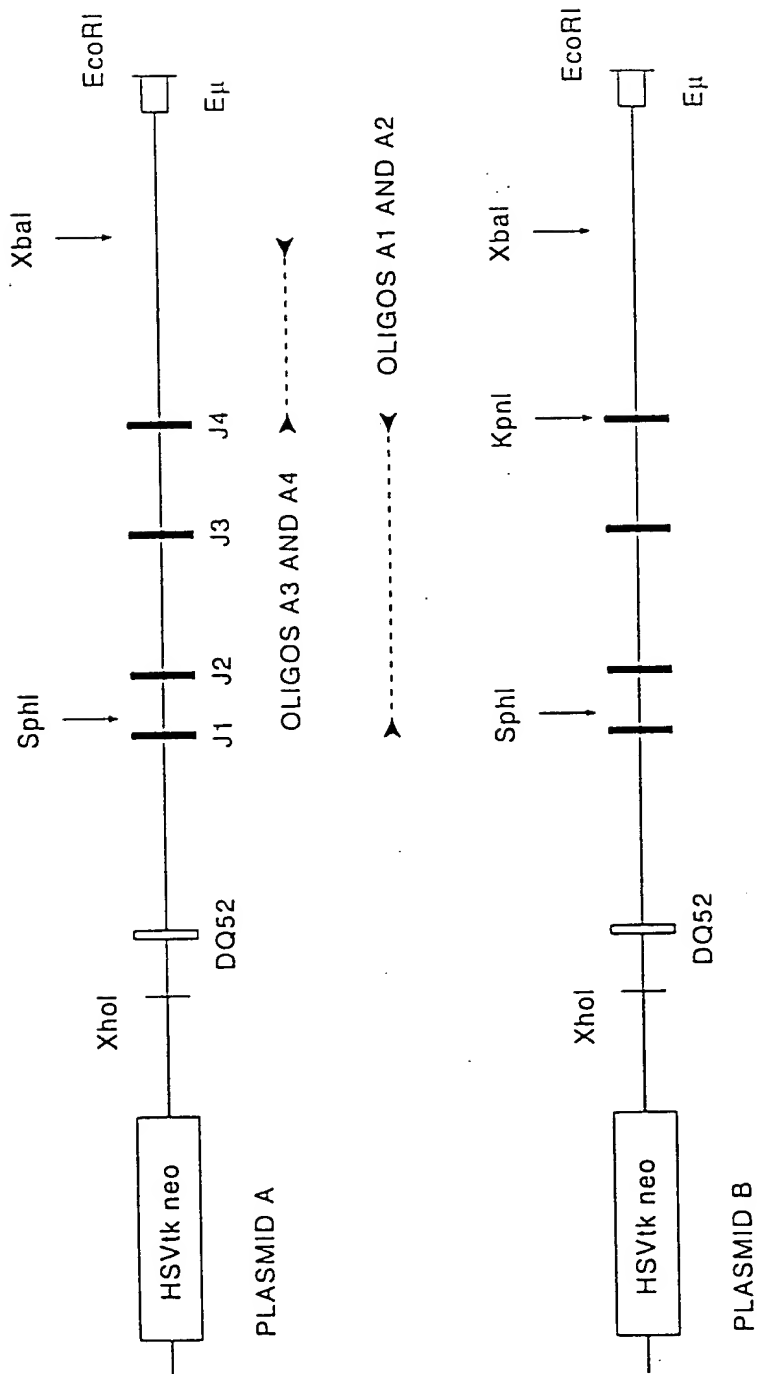


FIG. 62

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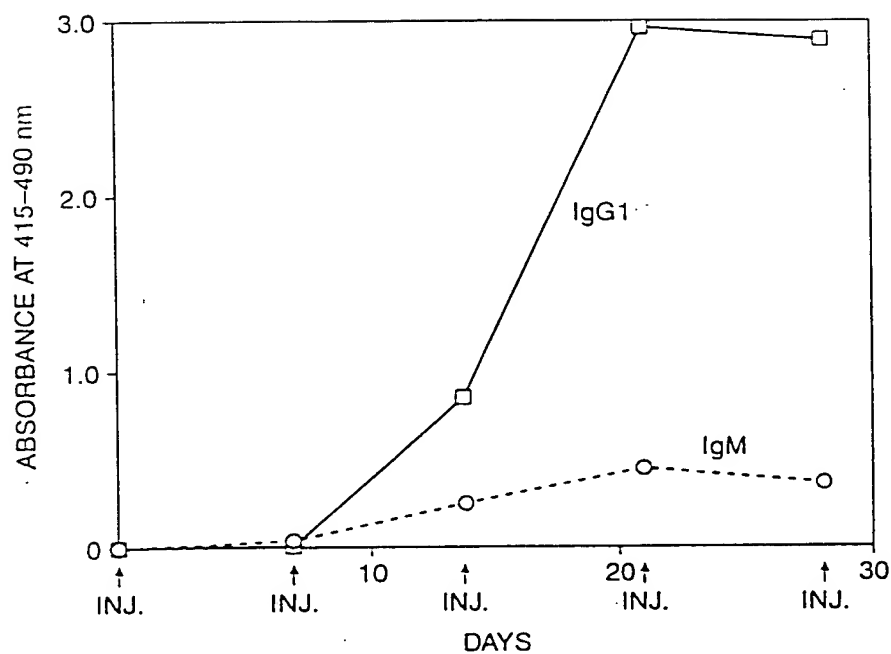


FIG. 63

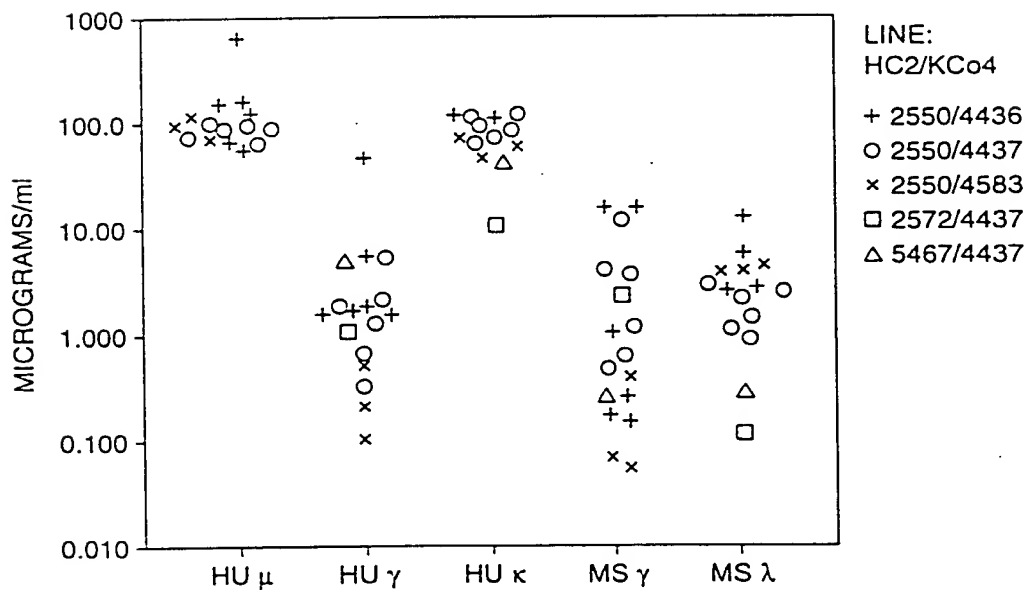


FIG. 70

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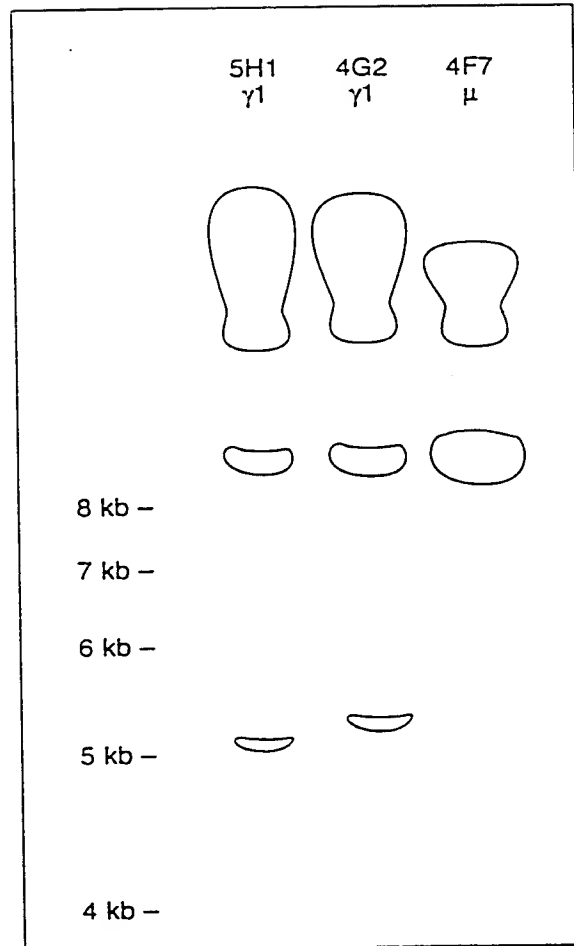


FIG. 64A

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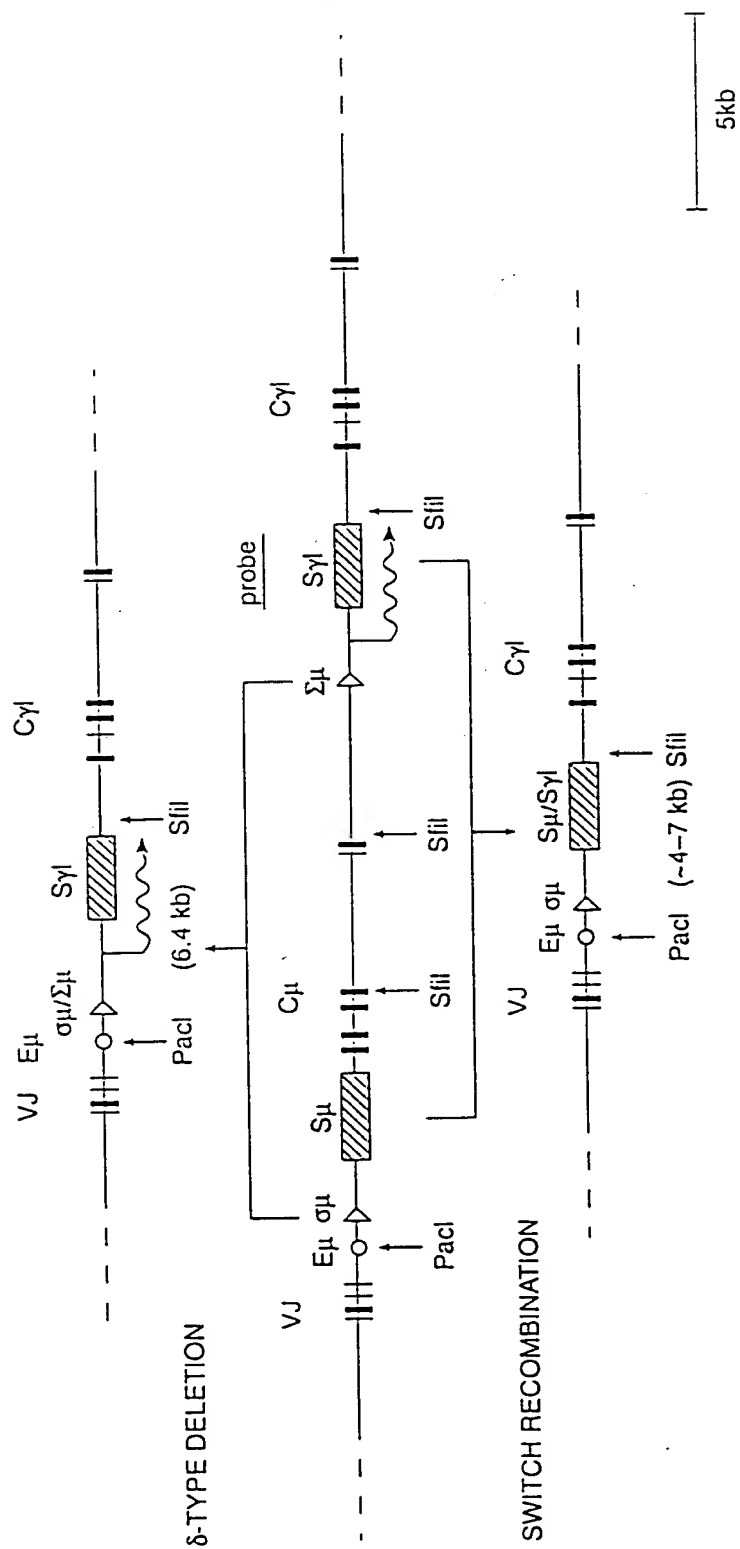


FIG. 64B

VH251	N D N	J	Cy	mouse $\gamma 1$
2357.t5 DXP'1 J6	gacctggaacaccgcatgtattactgtgtgaga	CATTtatgttcggggagttacG	cggatGtgAacgtctggggccaagggaaccacgggtcacggtctctctctcag	ccaaacgacaccccccatctgtctatccac
2357.t7 DIQ52 J3	gacctggaacaccgcatgtattactgtgtgaga	CactgggCATTGcAT	gctCttgtGtctggggccaagggaacatgGtcacggtctctctcag	ccaaacgacaccccccatctgtctatccac
2357.t2 DIQ52 J3	gacctggaacaccgcatgtattactgtgtgaga	actgggggATGAT	gctttttgatattctggggccaagggaacatgggtcacggtctctctcag	ccaaacacacaccccccatcagtcctatccac
2357.t3 D? J3	gacctggaacaccgcatgtattactgtgtgaga	CAGGGGAGAGAT	gctttttgatattctggggccaagggaacatgggtcacggtctctctcag	ccaaacacacaccccccatcagtcctatccac
2357.t4 DXP'1 J4	gacctggaacaccgcatgtattactgtgtgaga	CATAGGGacttatTtctggggagttattTTC	tgactactggggccaagggaacccctgggtcacggtctctctcag	ccaaacacacaccccccatcagtcctatccac
2357.t10 DIQ52 J3	gacctggaacaccgcatgtattactgtgtgaga	actgggggATGAT	gctttttgatattctggggccaagggaacatgggtcacggtctctctcag	ccaaacacacaccccccatcagtcctatccac
2357.t1 D? J3	gacctggaacaccgcatgtattactgtgtgaga	CATGGGTCTATG	gatattctggggccaagggaacatgggtcacggtctctctcag	ctacacacacacagcccccatctgtctatccct
2357.t6 DIQ52 J4	gacctggaacaccgcatgtattactgtgtgaga	GAGAGCGGTcactgggggATCG	ttttgaactatTtggggccaagggaacccctgggtcacggtctctctcag	ctacacacacacagcccccatctgtctatccct
2357.t8 DIR2 J3	gacctggaacaccgcatgtattactgtgtgaga	AGGgacccccCTGAT	gctttttgatattctggggccaagggaacatgggtcacggtctctctcag	ctacacacacacagcccccatctgtctatccct
2357.t9 DIR2R J6	gacctggaacaccgcatgtattactgtgtgaga	Cgggggcct	tactactactacggtatggacgtctggggccaagggaaccacgggtcacggtctctctcag	ctacacacacacagcccccatctgtctatccct
		human		mouse

FIG. 65

FIG. 66A.1

FIG. 66A.1

70 ACCATCTCAGCCGCAAGTCCATCAGACCCGCTACTCGAGTGGAGCAGCCTGAGGGCTCGGACACCCCATGTATTACTGTCCAGA 90

80 82 a b c 83

96

[illegible]

..... (ATGAaactggggatccccggg

ACGGattacgatattttgactgggttattataaacCTT
tatagcagcagcCTT
TCTtactatagttcggggag
CTCGattacgatattttgactgggttattataaacCT
CTCGattacgatattttgactgggttattataaacCT
CTCGattacgatattttgactgggttattataaacCT
CTCGattacgatattttgactgggttattataaacCT

TACTACTATA
TCTGATGGAGCGGCAACAAAC
CAGCCGCCGGTTATTactatagttcgggggagtatta
GAGGgaactcaaaacCAT
.....G.....

gttatta
.....6.....

COR III

FIG. 66A.2

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[illegible]

FIG. 66B.1

THE 1964-65

[illegible]

FIG. 66B.2

20	30	40	50	52 a	53	60
1CTCTGAAGATCTCTGTAAGGGTTCTGGATACAGCTTTACAGCTACTGGATCGGCTGGTGCCGACAGATGCCCGGAAGGCTCGAGTGGATGGGATCATCTCTGGTGACTCTGATACCAGATACAGCCCGCTCTTCAAGGCCAGGTC						
2357.m1						
2357.m2						
2357.m5						
2357.m6						
2357.m7						
2357.m12						
2357.m13						
2357.m14						
2357.m16						
2357.m17						
2357.m18						
2357.m19						
2357.m20						
2357.m22						
2357.m26						
2357.m27						
2357.m28						
2357.m29						
2357.m30						
2357.m31						
2357.m32						
2357.m33						
2357.m35						
2357.m36						

CDR II

CDR I

FIG. 67A

FIG. 67B.1

70	80	82	a	b	c	83	90
ACCATCTCAGCCGACAGTCCATCAGCAGCCCTACTCTGAGTGGAGAGCTGAGGCTTCGGACACCCCATGTATTACTCTGGCAGA							
.....CG.....	CAGGGGGGGGATA						
.....	CATTCGctaaTgggaT						
.....	CGGgattacgataTtttgacTggttattatCGG						
.....GT.....						
T.....I.....A.....I.....A..C..G..I.....	GggtattatTatgTtcggggacTttattataaGTACCC						
.....	ctaactggCT						
.....	CATCTT						
.....	CAAGGG						
.....	CATCTT						
.....	CAAACT						
.....	CATggtatagcagcagctggttargtggTtcGACCC						
.....	CAGGGC						
.....	CATCTT						
.....	GGgggtataTcagcagcTggT						
.....	CATCTT						
.....	GtggTtcggggatTtattatT						
.....	CAAGGGG						
.....	G GATCTGG						
.....	CTCCCAATGACAGT						
.....	CGGGGctactatgTtcggggagTttat						
.....	TACTACTACTACTACGATAGGAGCTCTGGGGCCAGGGGACACCGTC						
.....	CATGagcagctggTcacAGGT						
.....	GATATGGGGGGGCTTC						
.....I.....I.....						
.....	C.....G.....						
.....	A.....						
.....	CG						

CDR III

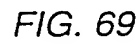
FIG. 67B.2

	20	30	40	50	52 o 53	60
VH56P1.G1	TCCCTGAGACTCTCTGTGCAGCTCTGCAATTCACCTTCAGTAGCTATGCTATGCACTGGGTC	CCAGGCTCCAGGCAAGGGCTGGAGTGGGTGGCAGTTATATATATATGATGGAAGCAATAAATACTACCGAGACTCCGTGAAGGCCGATTC				
J2
5250.ln4
5250.ln5
5250.ln8
5250.ln10
5250.ln12
5250.ln17
5250.ln115
5250.ln118
5250.ln202
J4
5250.ln16
5250.ln19
5250.ln22
5250.sp26
5250.sp27
J6
5250.ln3
5250.ln24
5250.sp19
5250.sp22
5250.sp28
VH51P1.G1	TCCGTGAAGGTCTCTCGAAGGCTCTCGAGGCACCTTCAGCAGCTATGCTATCAGCTGGGTGGACAGGCTTCGACAAAGGCTTCAGTGGATGGGAAGGATCATCCCTATCTTGGTATAGCAAACTACGACAGAAAGTTCAGGGCAGAGTC					
J3
5250.sp33
VH4.21.G1	ACCTGTCTCCACCTGCGGTCTATGGTGGTCTTCAGTGGTTACTACTGGAGTGGATCCGCCAGCTCCAGGCAAGGGCTGGAGTGGATTGGGGAATCAATCAT	AGTGGGAAGCACCACTACACACCTCGTCCCTCAAGAGTGCAGTC				
J4
5250.ln2
5250.sp30
5250.sp32

COR I

COR II

FIG. 68A



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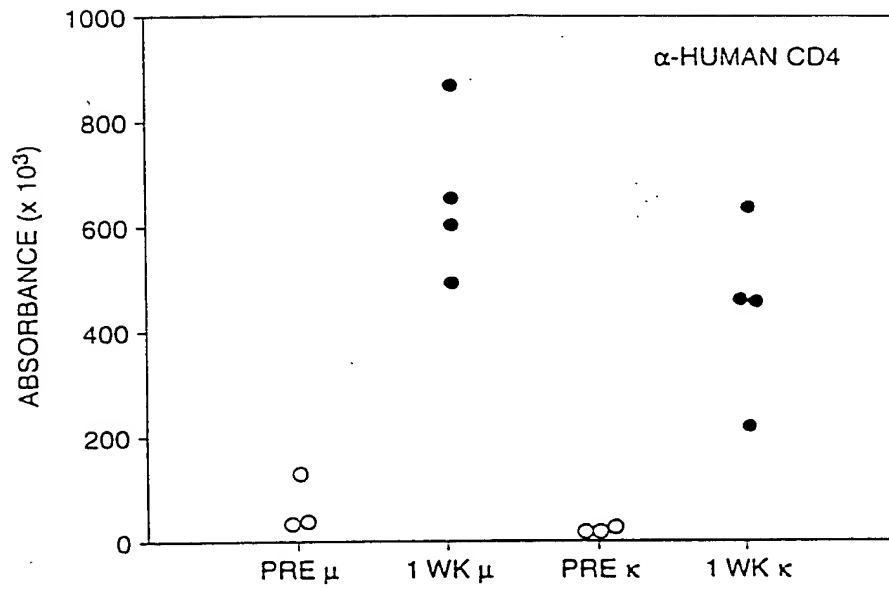


FIG. 71A

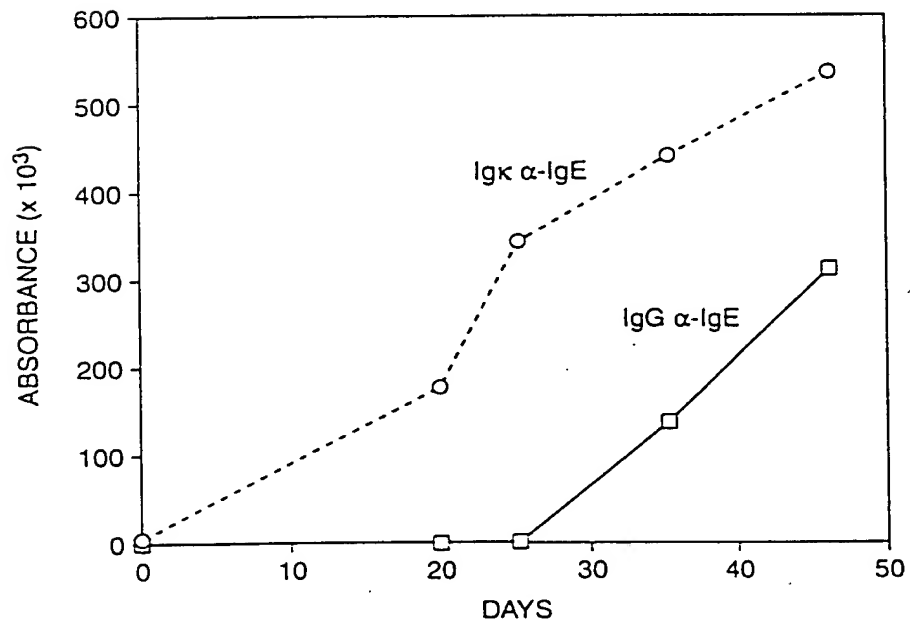


FIG. 71B

002217-9964260

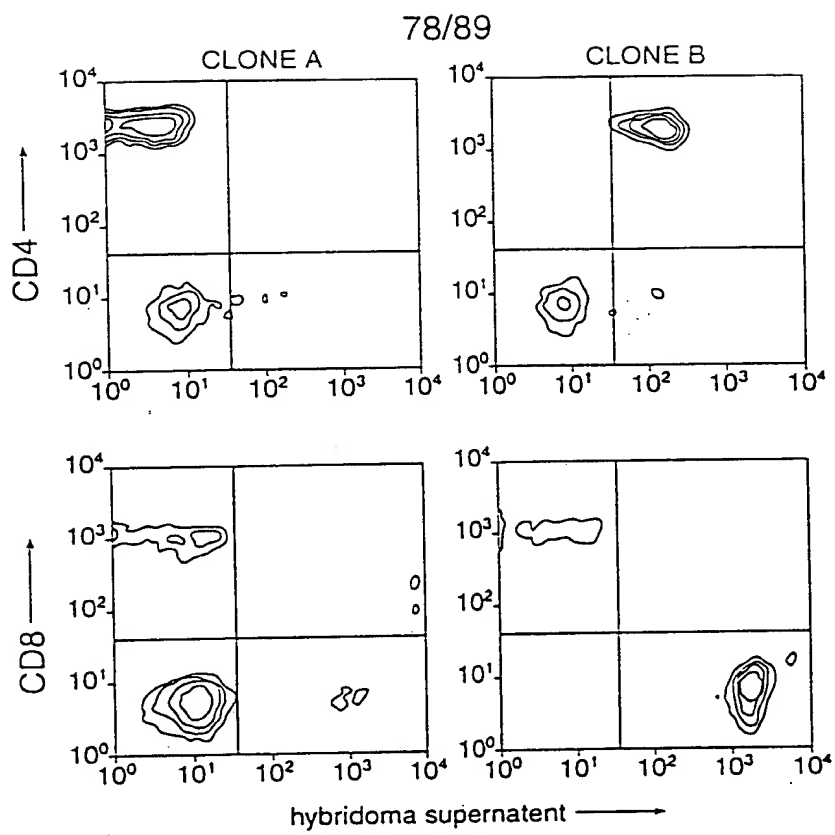


FIG. 72

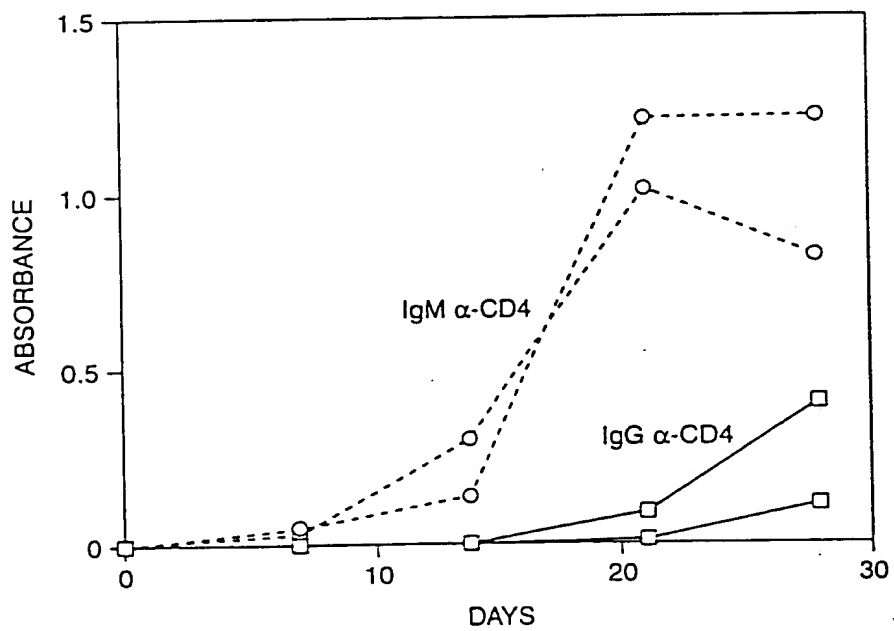


FIG. 73

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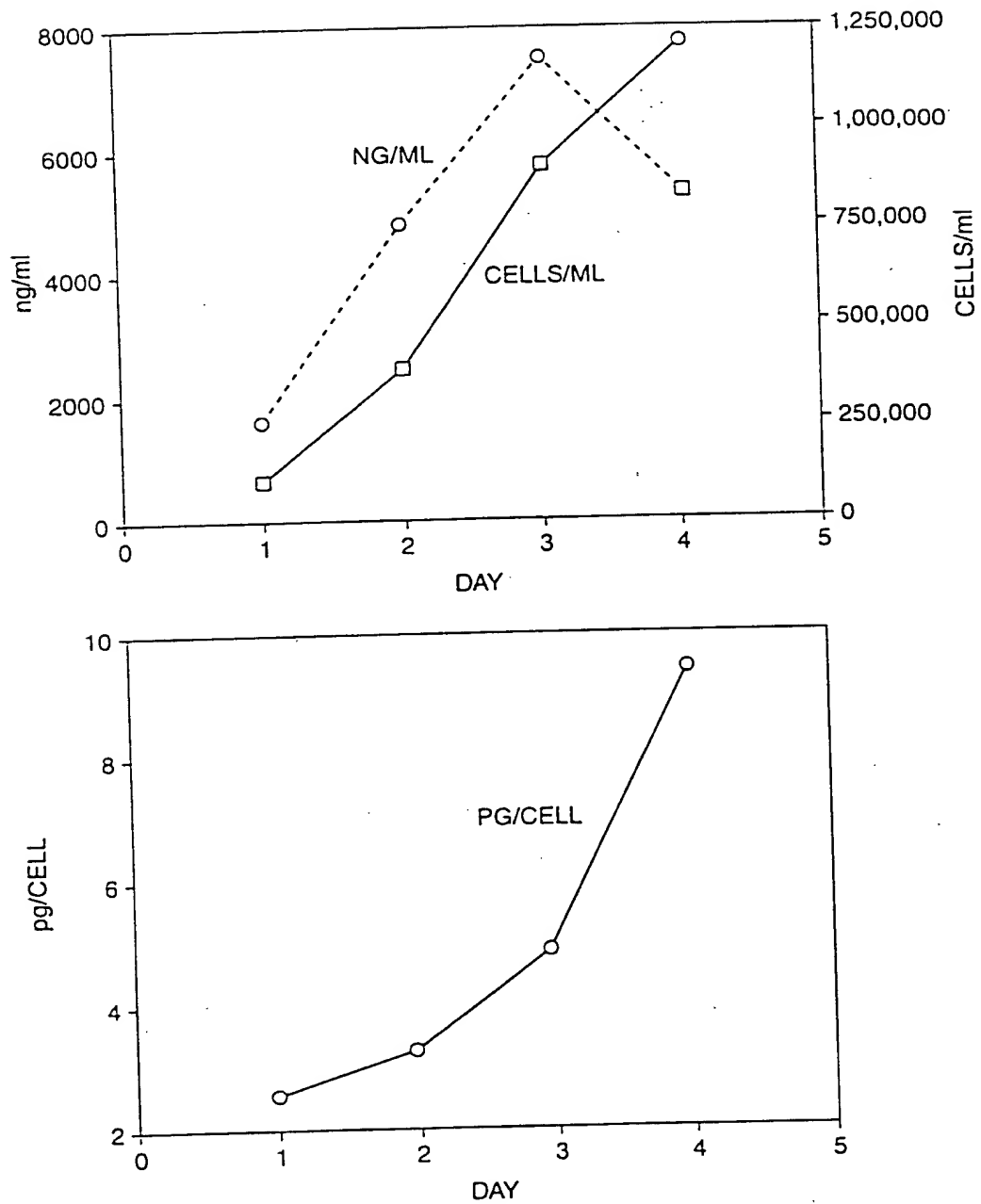


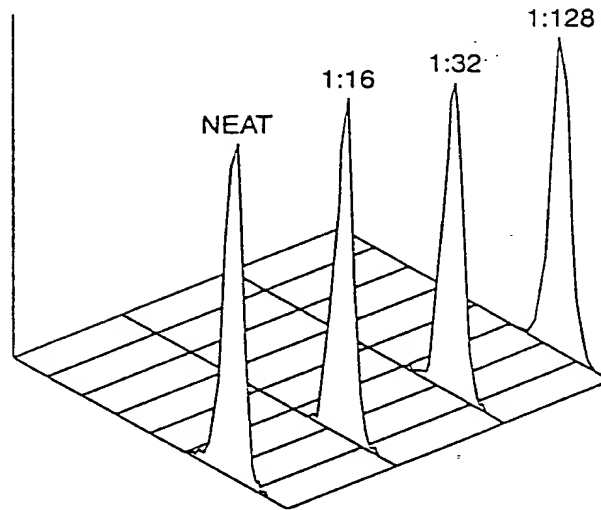
FIG. 74

008211 9964260

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RPA-T4/2C11-8

#12:BDPHARMCOMP004\FL2-H\FL2-HEIGHT



Leu-3a/2C11-8

#12:BDPHARMCOMP025\FL2-H\FL2-HEIGHT

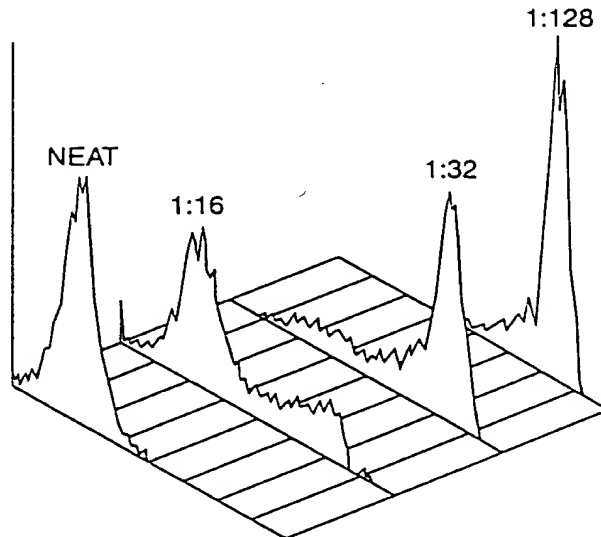


FIG. 75

00827T" 59642260

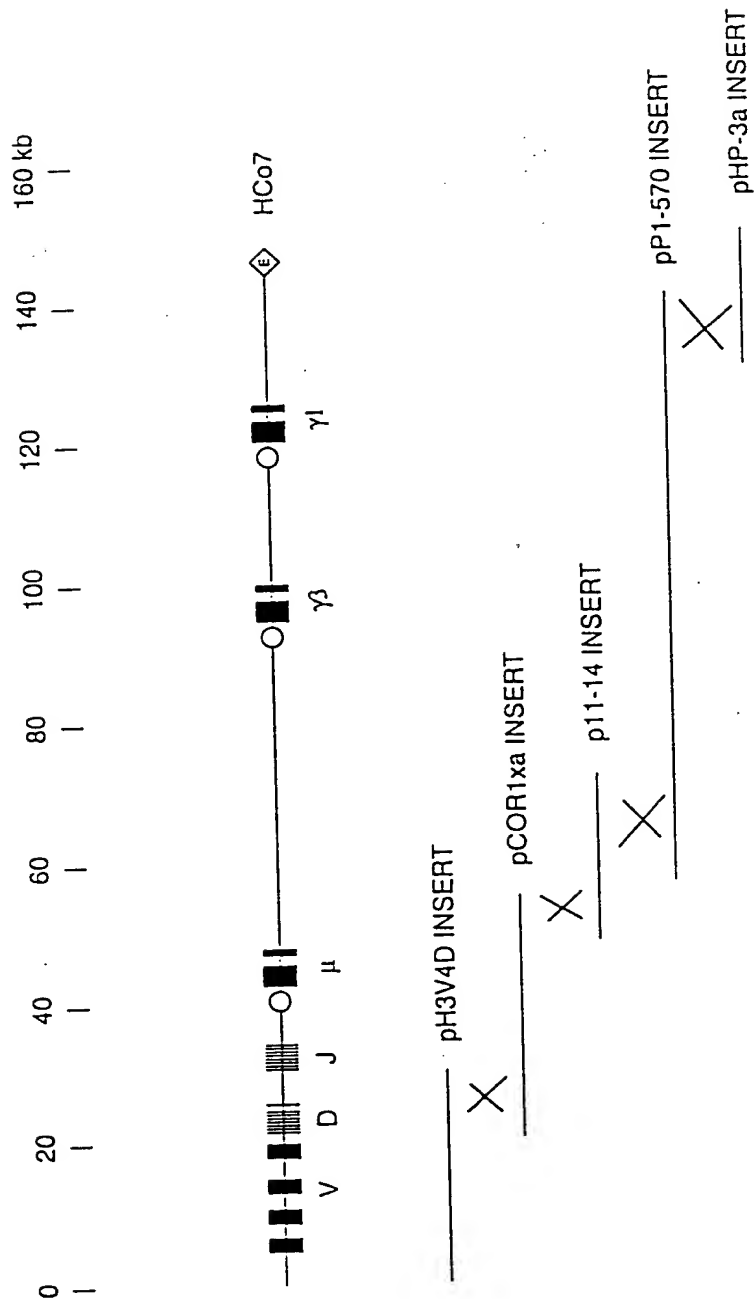


FIG. 76

pGP2b sequence:

AATTAGCggccgctgtcgacaagcttcgaattcagatcgatgtggtacctggatcctcgagtgcGGCCGCAGTATGCAA
 AAAAAAGCCCGCTCATTAGCGGGGCTCTTGGCAGAACATATCCATCGCGTCCGCCATCTCCAGCAGCCGCACGCGGCGCA
 TCTCGGGCAGCGTTGGGTCTGGCCACGGGTGCGCATGATCGTGTCTCTGTCTGAGGACCCGGCTAGGCTGGCGGGGT
 TGCCTTACTGGTTAGCAGAATGAATCACCGATACGGGAGCGAAGCTGAAGCGACTGCTGCTGCAAAACGTCTGCGACCTG
 AGCAACAACATGAATGGTCTTCGGTTTCCGTGTTTCGTAAAGTCTGGAAACGCGGAAGTCAGCGCCCTGCACCATTATGT
 TCCGGATCTGCATCGCAGGATGCTGCTGGCTACCTGTGGAACACCTACATCTGTATTAACGAAGCGCTGGCATTGACCC
 TGAGTGATTTTTCTCTGGTCCCGCGCATCCATACCGCCAGTTGTTTACCCTCACAAACGTTCCAGTAACCGGGCATGTTT
 ATCATCAGTAACCCGTATCTGTAGCATCCTCTCTCGTTTACGCGTATCATTACCCCATGAACAGAAATTCCCCCTTAC
 ACGGAGGCATCAAGTGACCAAAACAGGAAAAACCGCCCTTAACATGGCCCGCTTTATCAGAAGCCAGACATTAACGCTTC
 TGGAGAACTCAACGAGCTGGACGCGGATGAACAGGAGACATCTGTGAATCGCTTCAGACCAAGCTGATGAGCTTTAC
 CGCAGCTGCTTCGCGCGTTTCGGTGATGACGGTGAACCTCTGACACATGCAGCTCCCGGAGACGGTCAAGCTTTGCT
 GTAACGGATGCCGGGAGCAGACAAGCCCGTCAGGGCGCGTCAGCGGTGTTGGCGGGTGTGCGGGCGCAGCCATGACCC
 AGTCACGTAGCGATAGCGGAGTGATACTGGCTTAACATGCGGCATCAGAGCAGATTGTACTGAGAGTCCACCATATGC
 CGTGTAATACCGCACAGATGCGTAAGGAGAAAAATACCGCATCAGGCGCTCTTCCGCTTCTCGCTCACTGACTCGCTG
 CGCTCGGTGCTTCGGTTCGCGGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAA
 CGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATA
 GGCTCCGCCCCCTGACGAGCATCAAAAAATCAGCGTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATAC
 CAGGCGTTTTCCCCCTGGAAGCTCCCTCGTGGCTCTCTGTTCCGACCTGCGCGTTACCGGATACCTGTCCGCTTTCT
 CCGTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCCGTGTAGGTGCTTCGCTCCAAGCTGG
 GCTGTGTGCACGAACCCCGCTTCAGCCGACCGCTGCGCTTATCCGGTAACATCGTCTTGAGTCCAACCCGTAAGA
 CACGACTTATCGCCACTGGCAGCAGCCAggcgcgcttggcctaagaggccaCTGGTAACAGGATTAGCAGACCGAGGTA
 TGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTC
 TGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTTGTATCCGGCAAACAAACACCGCTGGTAGCGGTGTTTT
 TTTGTTTGAAGCAGCAGATTACCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGC
 TCAGTGAAGCAAACTCAGGTTAAGCGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATT
 AAAAAATGAAGTTTTAAATCAATCTAAAGTATATATCAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGCA
 CCTATCTCAGCGATCTGTCTATTTCTGTTATCCATAGTTGCTGACTCCCGCTCGTGTAGATAACTACGATACGGGAGGG
 CTTACCATCTGGCCCCAGTCTGCAATGATACCGCGAGACCCACGCTCACCAGGCTCCAGATTTATCAGCAATAAACCAGC
 CAGCCGGAAGGGCCGAGCCAGAAAGTGGTCTGCAACTTTATCCGCTCCATCCAGTCTATTAATTGTTGCCGGGAAGCT
 AGAGTAAGTAGTTGCCAGTTAATAGTTTGGCGCAACGTTGTGCCATTGCTCCAGGCATCGTGGTGTACCGCTCGTCTGTT
 TGGTATGGCTTCATTAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCATGTGTGCAAAAAAGCGGTTA
 GCTCCTTCGGTCTCCGATCGTTGTGCAAGTAAGTTGGCCGAGTGTATCACTCATGGTTATGGCAGCACTGCATAAT
 TCTCTTACTGTATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAAGTCAACCAAGTCACTCTGAGAATAGTGTAT
 CGCGCGACCGAGTTGCTCTTGGCCGCGCTCAACACGGGATAATACCGCGCCACATAGCAGAACTTTAAAGTGTCTATCA
 TTGAAAAACGTTCTTCGGGGCGAAAACTCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCA
 CCCAACTGATCTTCAGCATCTTTTACTTTTACCAGCGTTTCTGGGTGAGCAAAAAACAGGAAGCAAAATGCCGCAAAAA
 GGAATAAGGGGACACGGAATGTTGAATACTCATCTCTCTCTTTTCAATATTATGAAGCATTATCAGGGTTATT
 GTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAACAAATAGGCGTTCCCGGCACATTTCCCGAAAAAGTG
 CCACCTGACGTCTAAGAAACCATTTATCATGACATTAACCTATAAAAAATAGCGGTATCAGAGGCCCTTTCTGCTTCA
 AG

FIG. 77A

09724965-112800

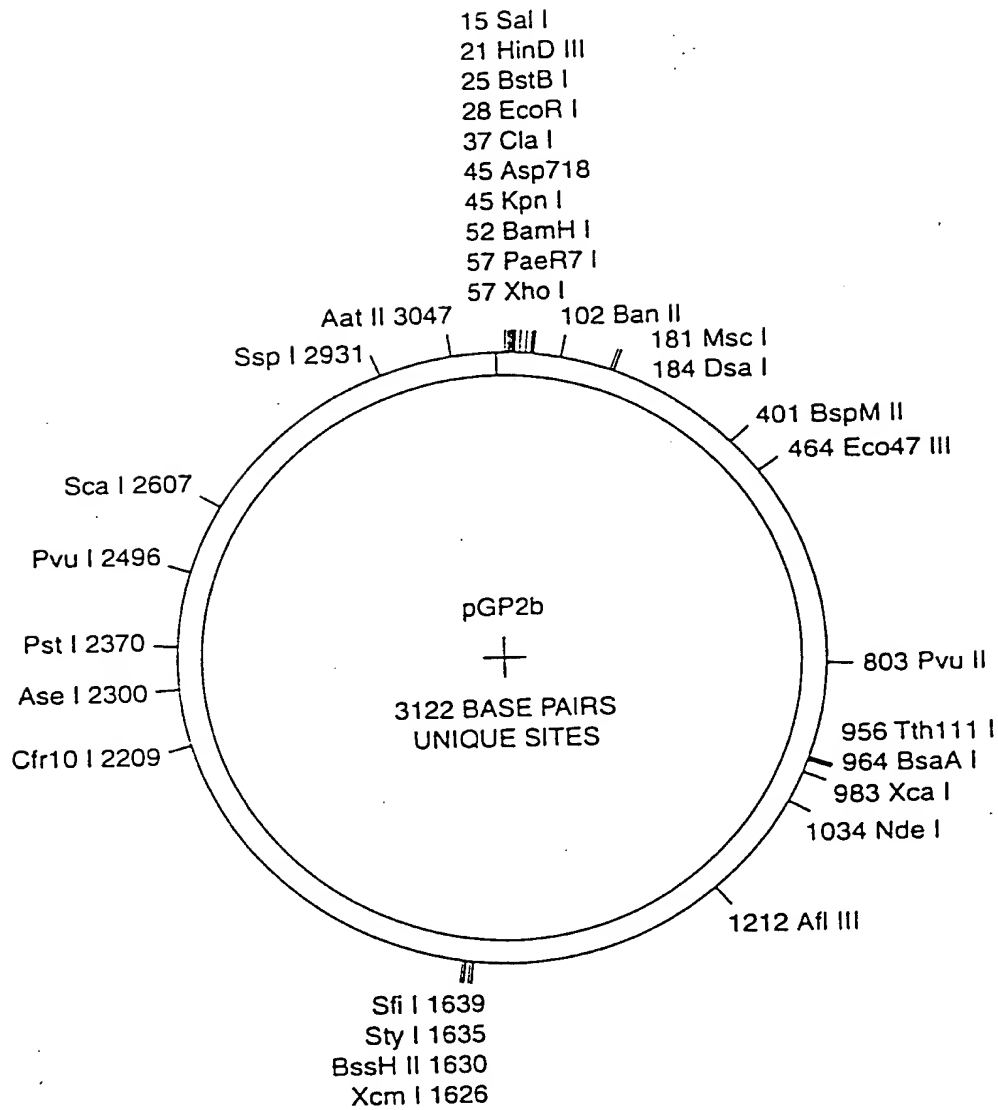


FIG. 77B

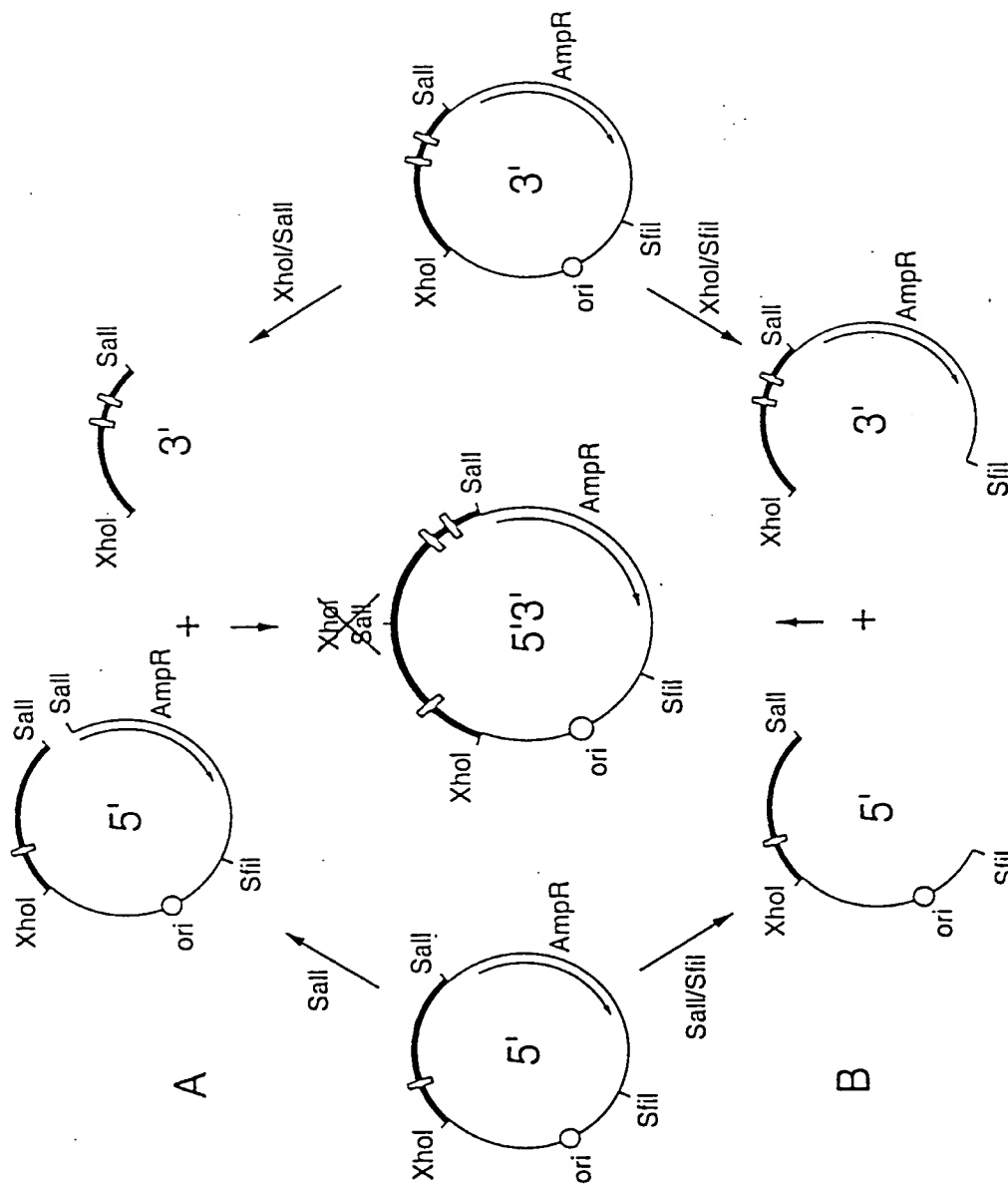


FIG. 78

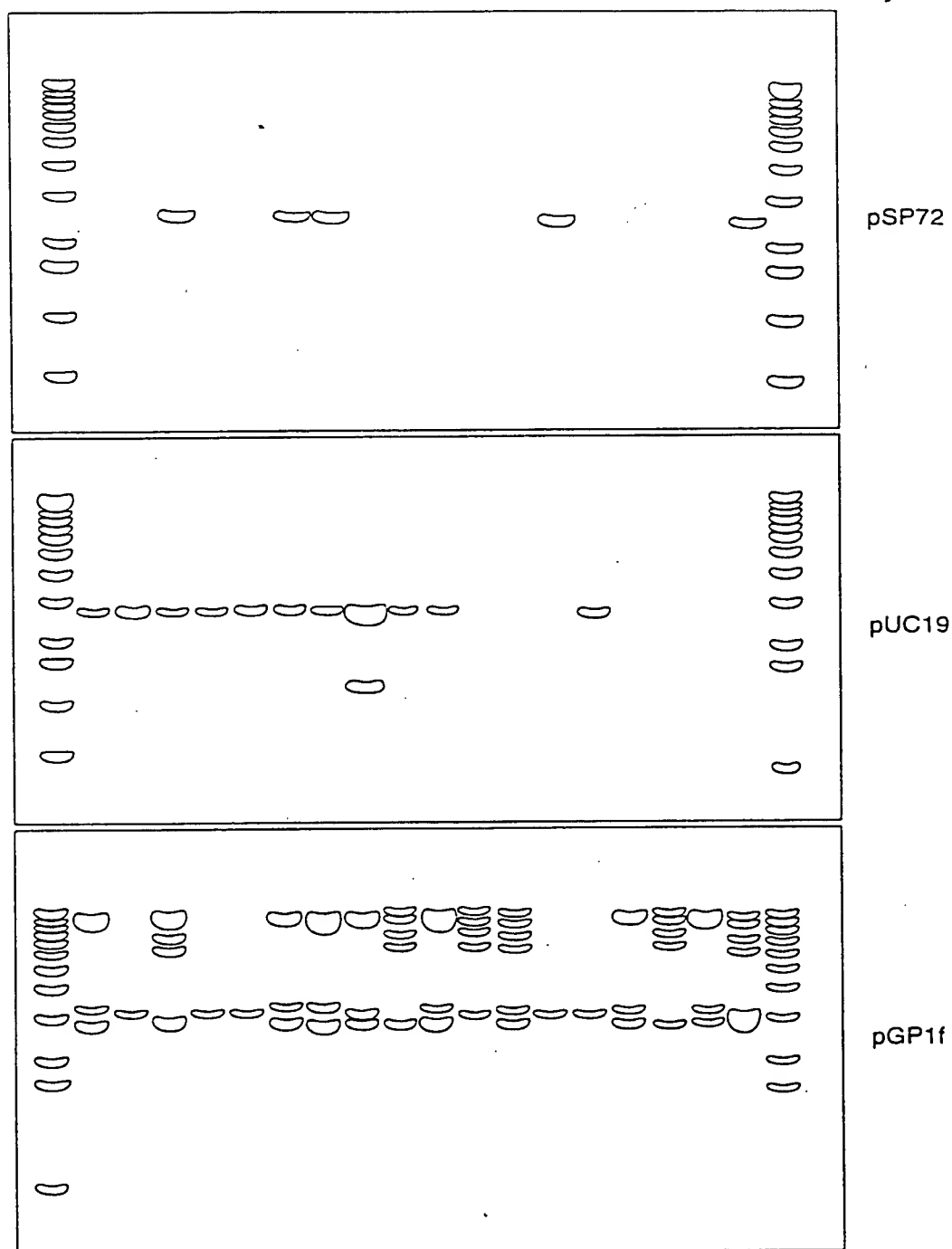
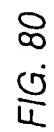


FIG. 79

008211 5964260



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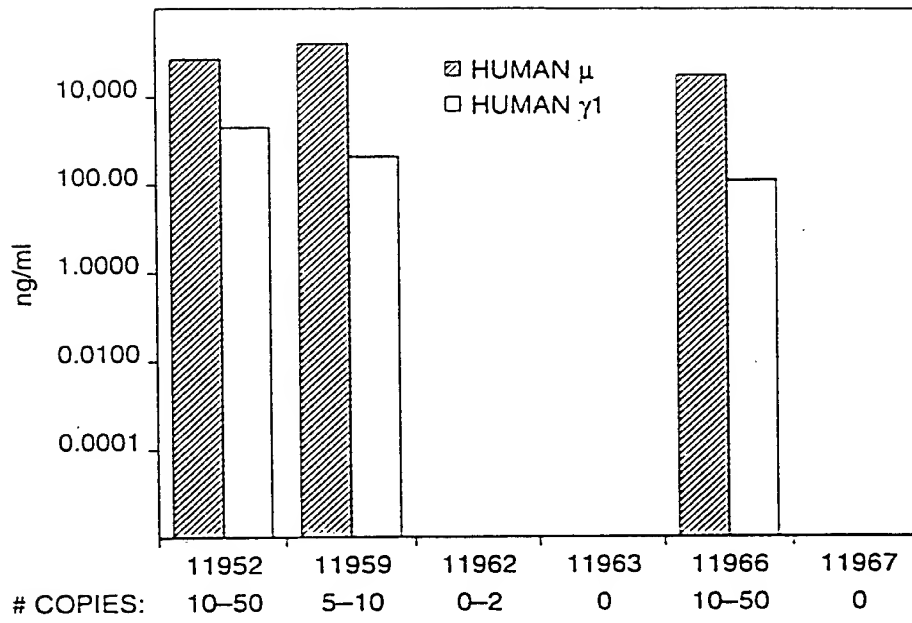


FIG. 81

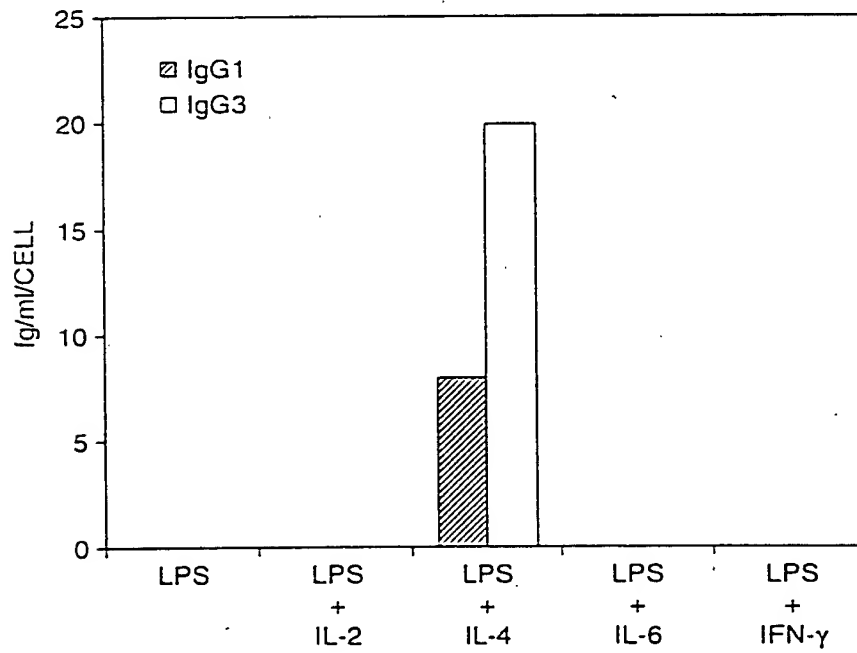


FIG. 84

008211 5964260

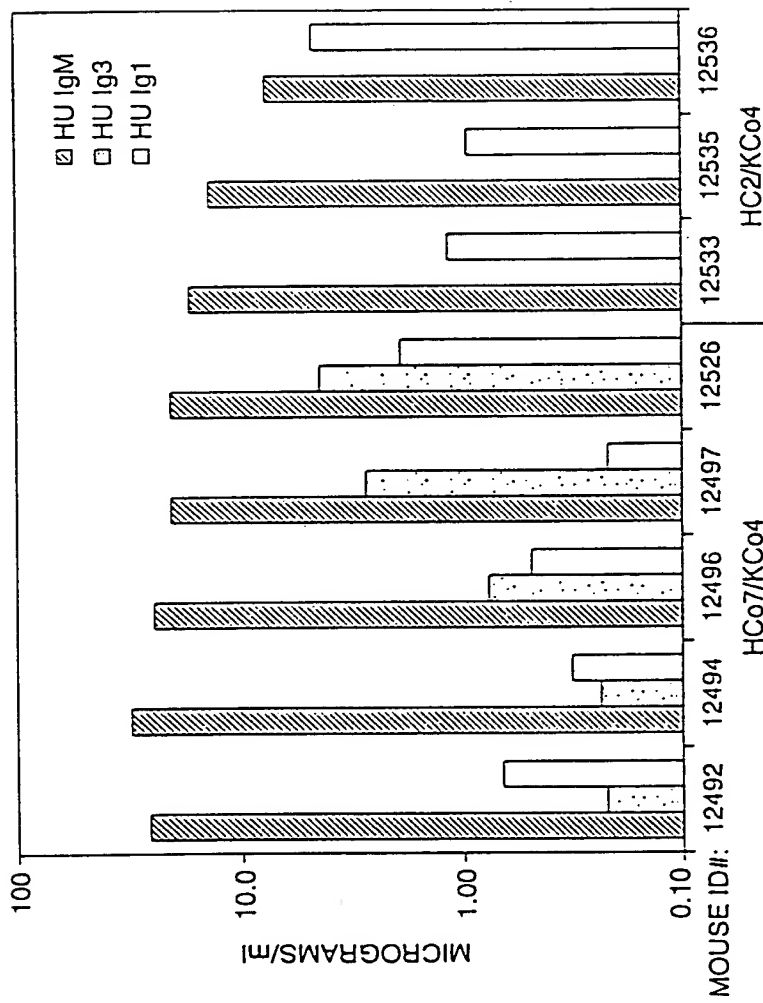


FIG. 82

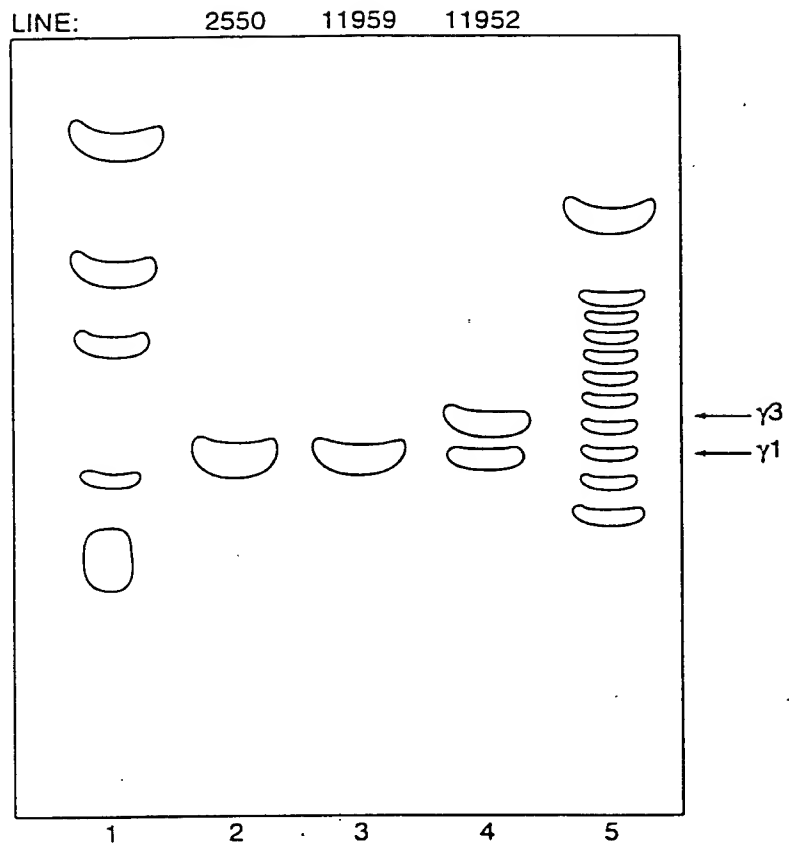


FIG. 83

003211 5964260

008217" 59642260

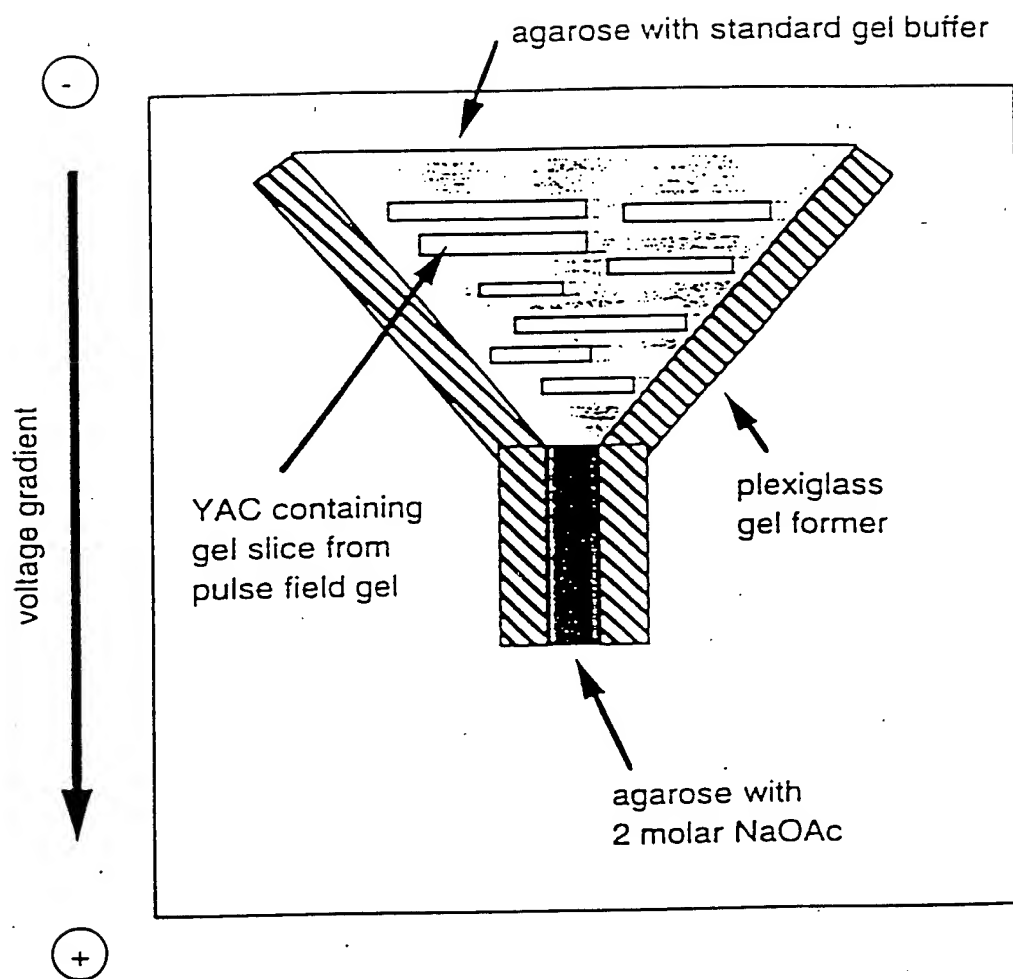


Figure 85

003217" 59642460

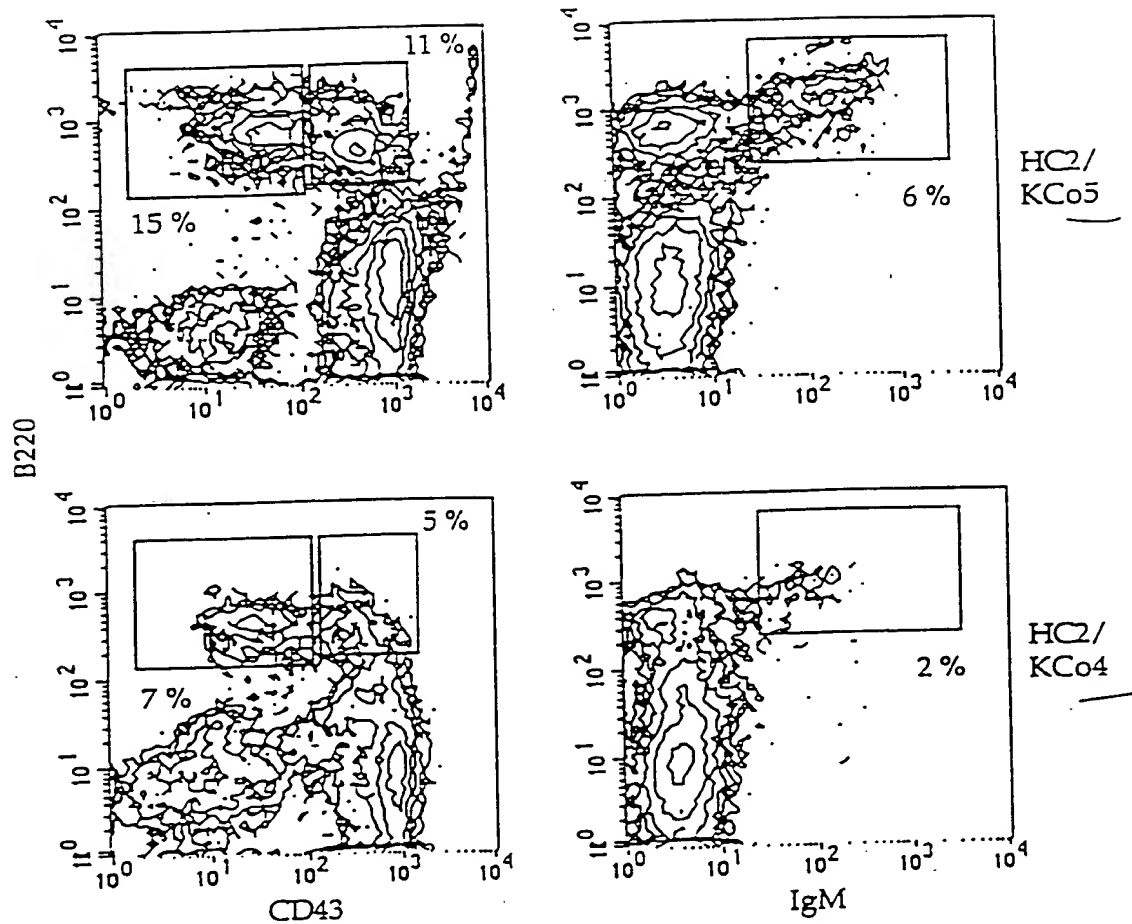


Figure 86

008211" 59642/60

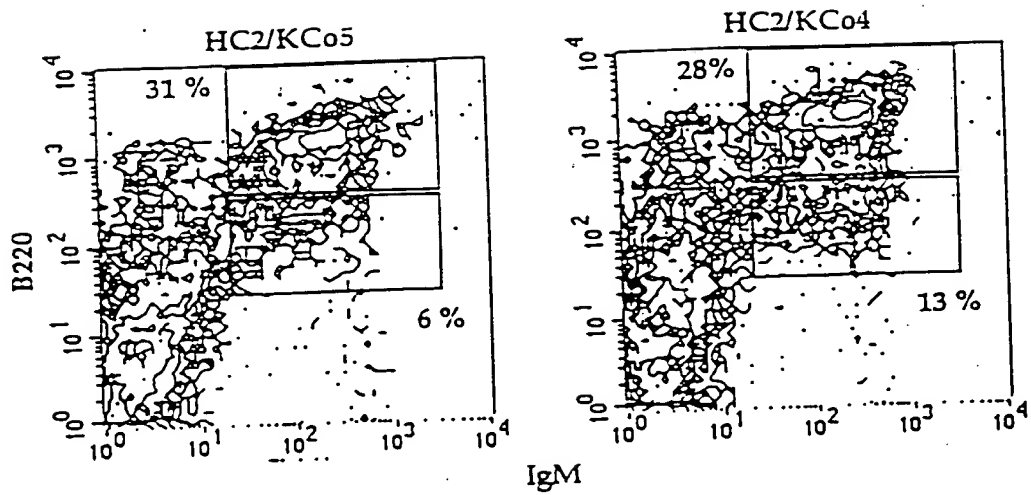


Figure 87

00821 59642/60

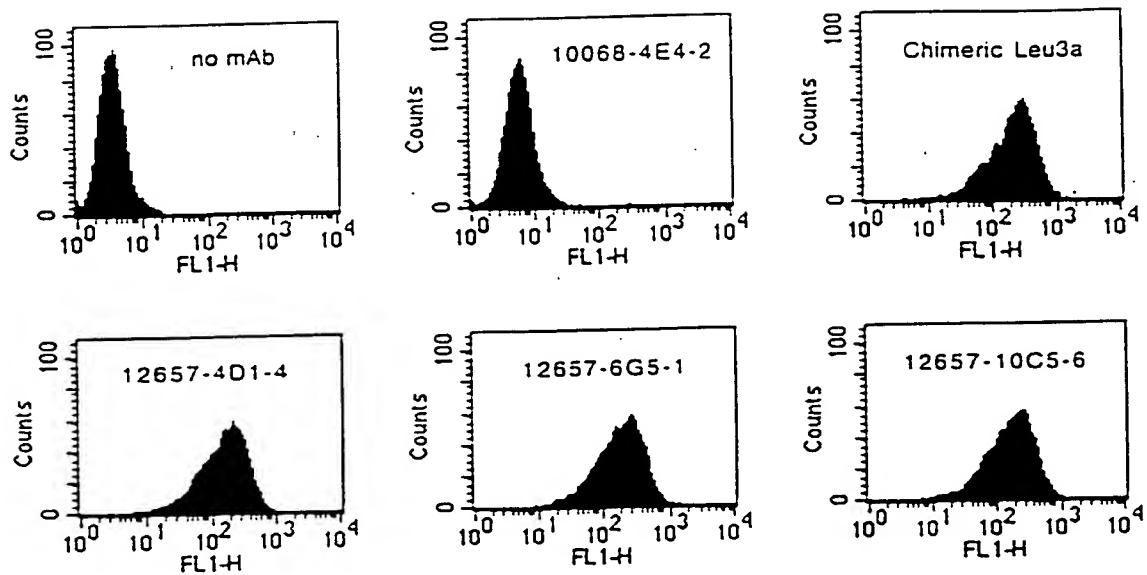


Figure 88

00321-59642-60

Cells pre-incubated with:

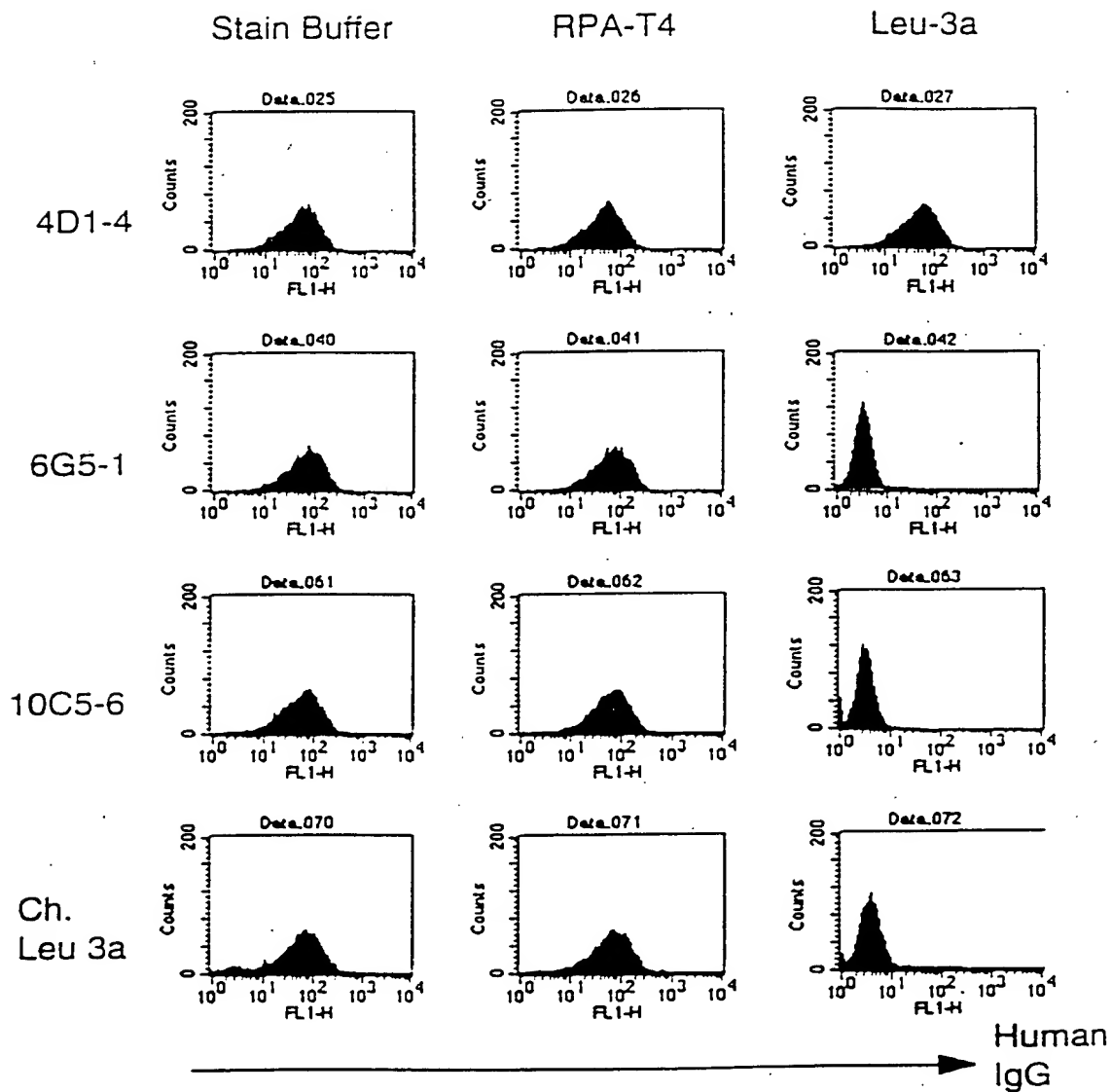


Figure 89

09724965-11200

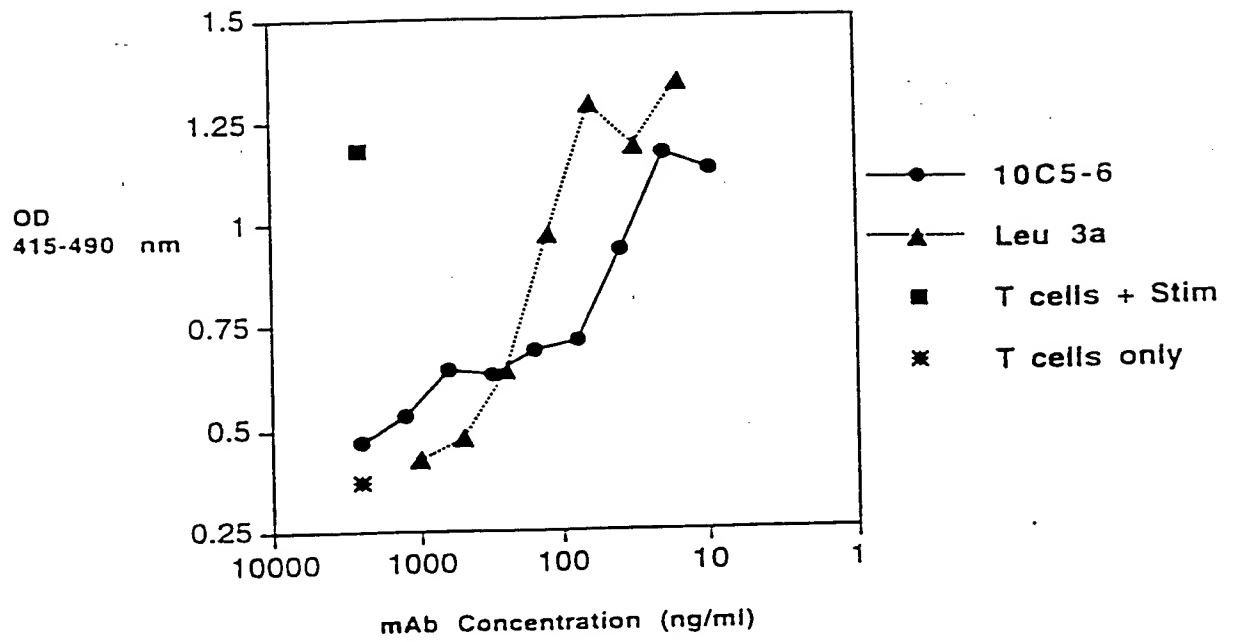


Figure 90

Figure 91

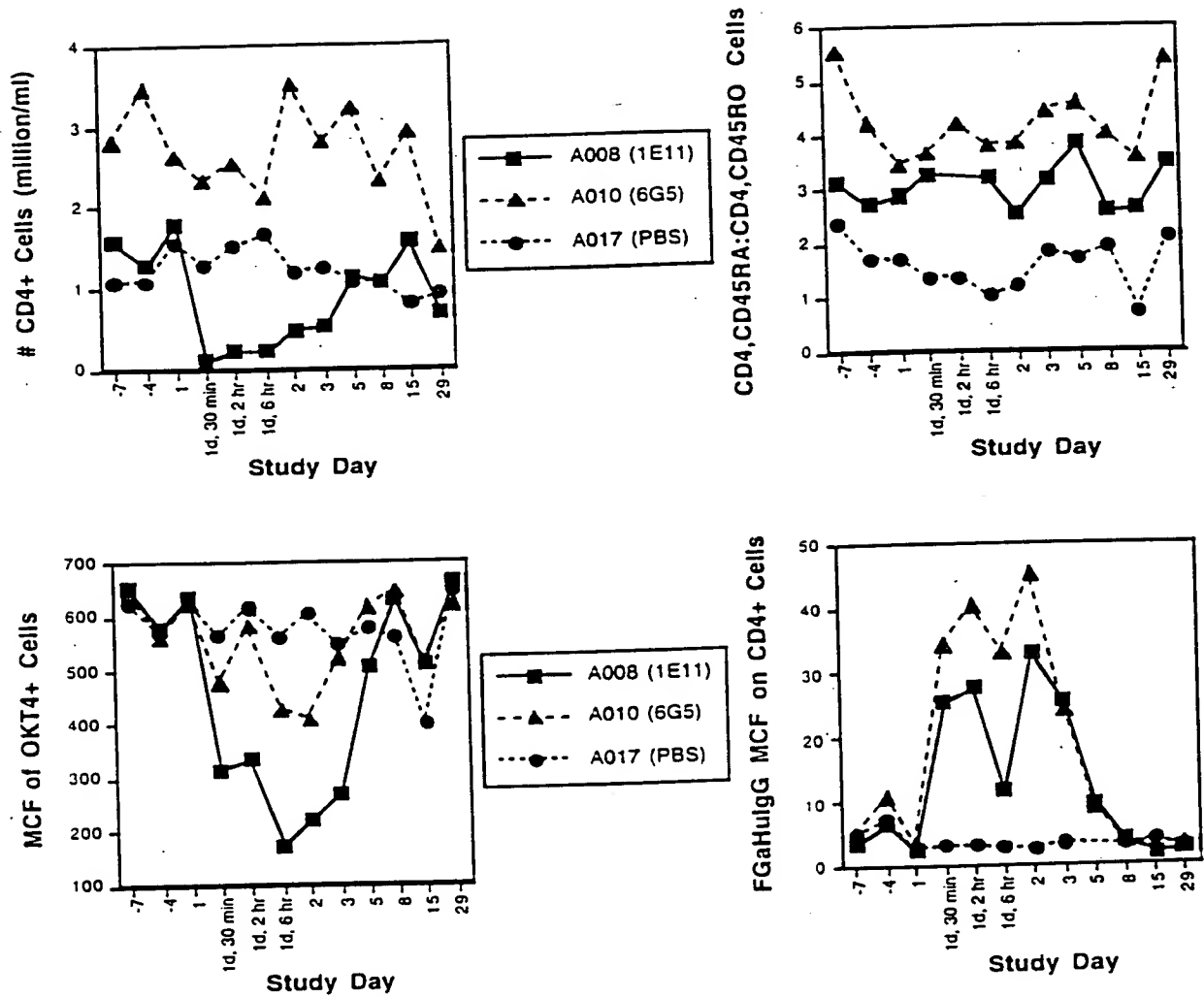
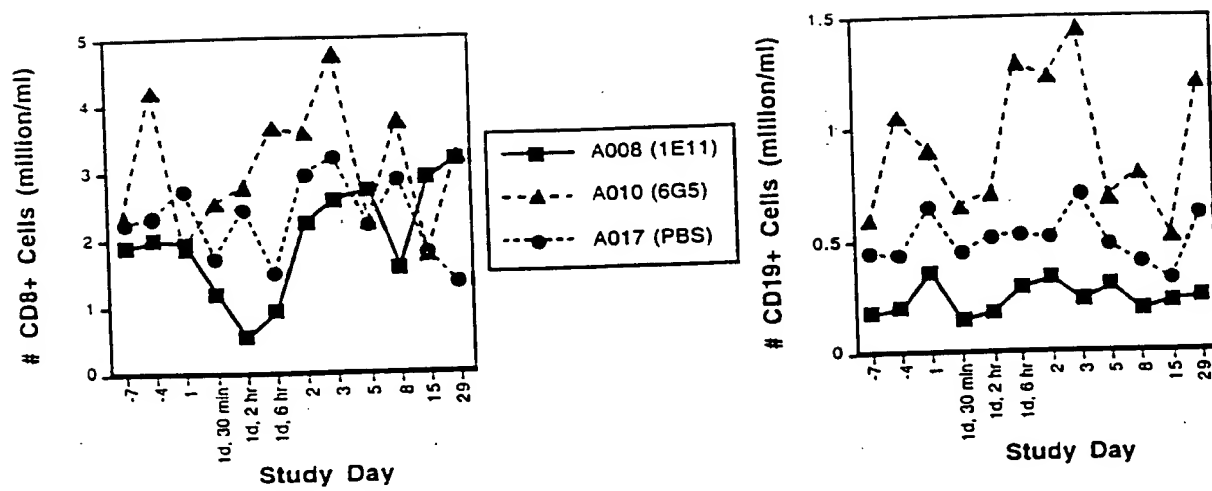


Figure 92



003211" 59642/60

Figure 93

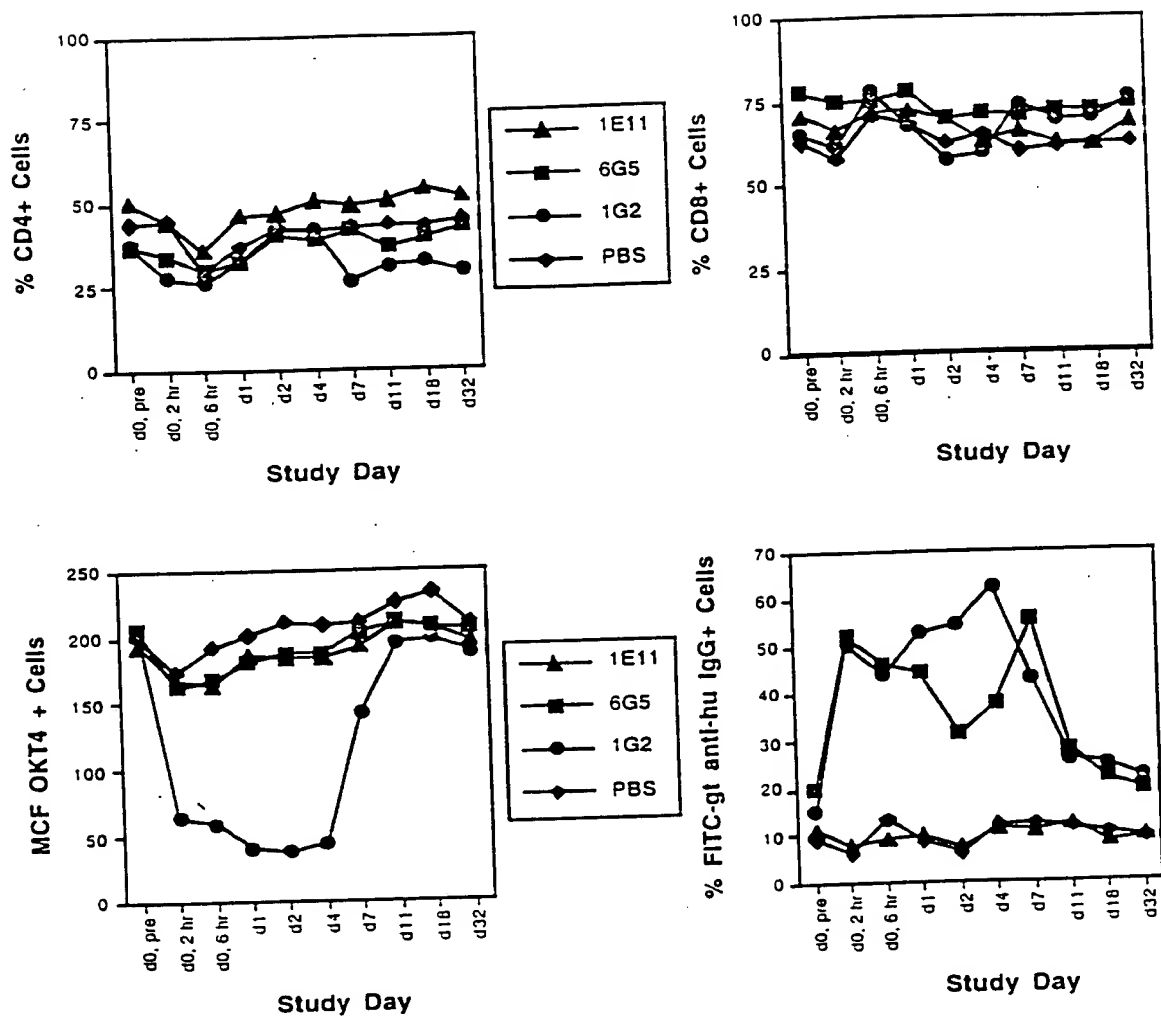
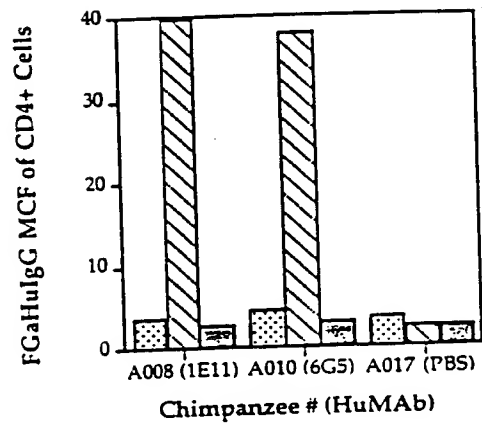
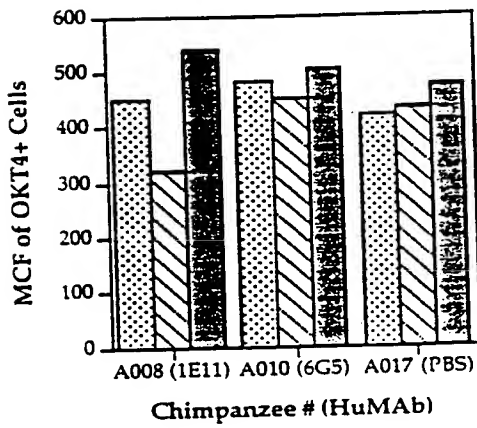
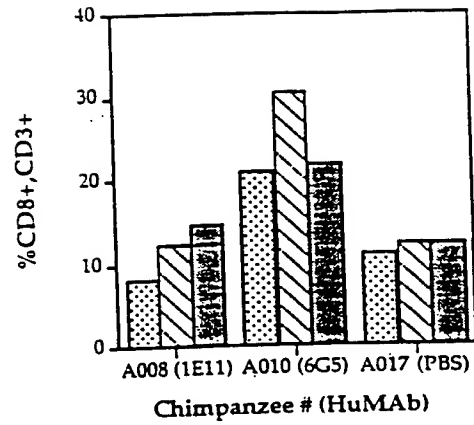
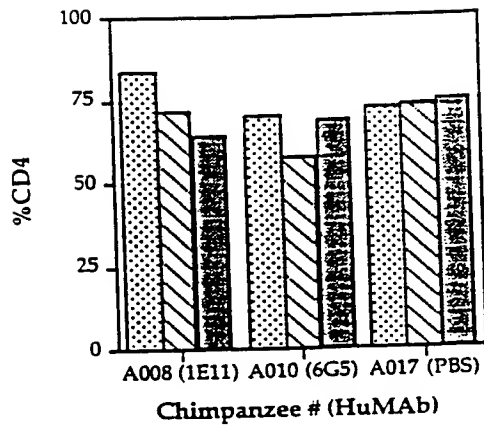


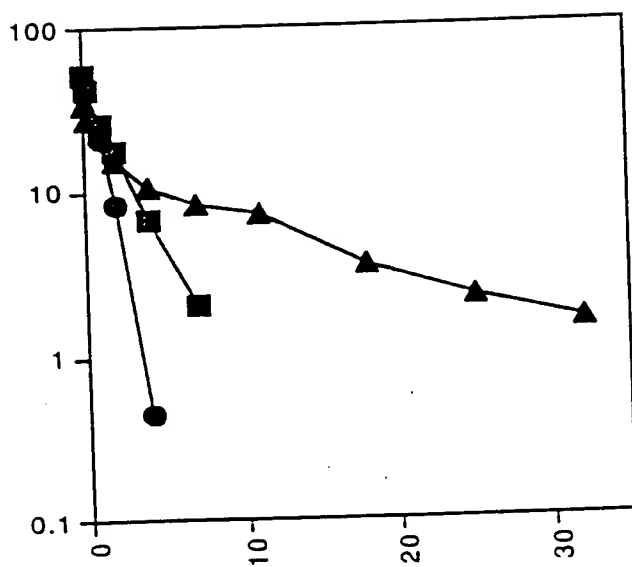
Figure 94



008277 " 59642.60

Figure 95

Anti-CD4 HuMAb Concentration ($\mu\text{g/ml}$)



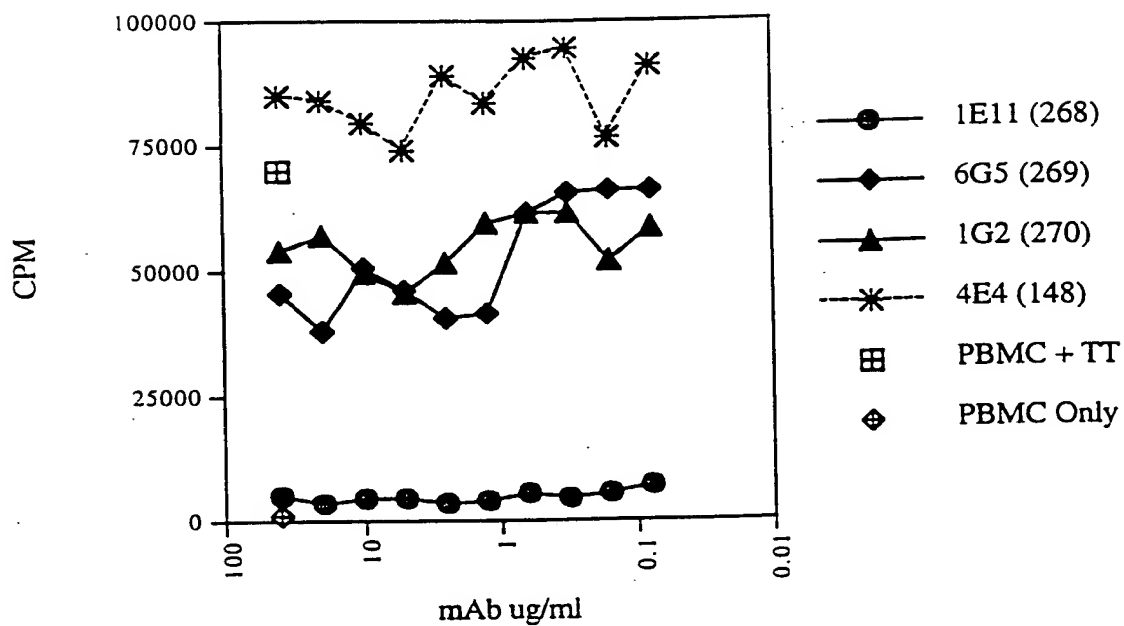
Study Day

HuMAb	Half-life (hr)	
	α	β
1E11	20	240
6G5	3.7	39
1G2		14

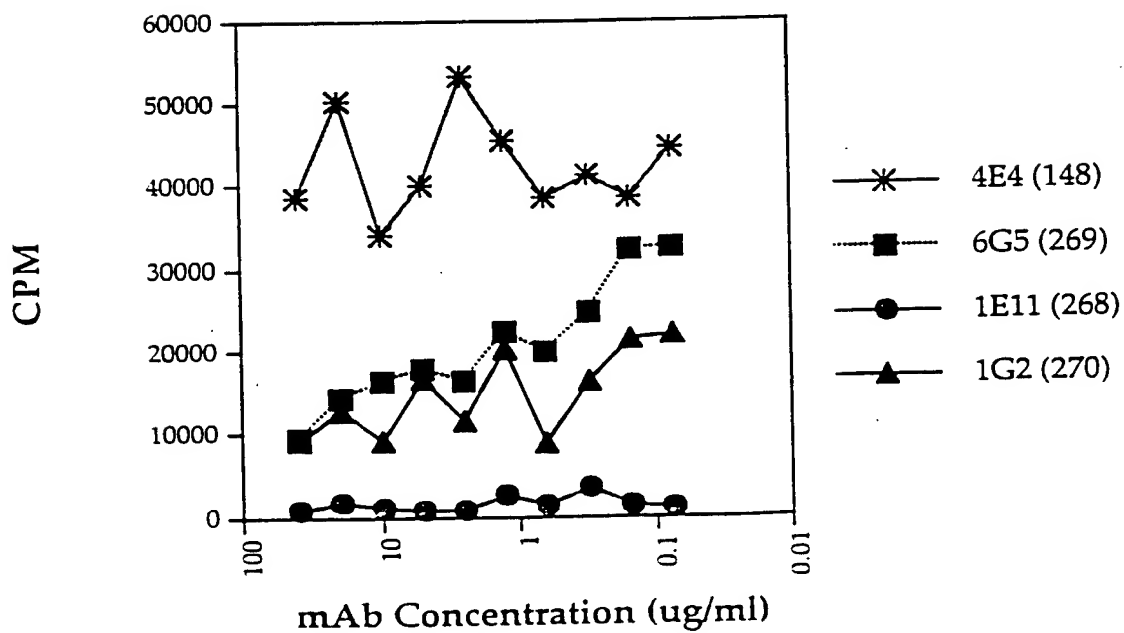
003217 5964260

Figure 96

TT 9/6/96 anti-CD4 Preps



TT 10/2/96 anti-CD4 Preps



003211 5964260